NATIONAL EVALUATION OF THE EVEN START FAMILY LITERACY PROGRAM

FINAL REPORT

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Contents

Acknowledgements

Preface

Chapter One	Program Background	1
	The Even Start Family Literacy Program	1
	Mandate for the Evaluation	3
Chapter Two	Design of the Program and the Evaluation	5
	Even Start Program Design	5
	Research Questions for the Evaluation	9
	Components of the Evaluation	12
Chapter Three	Description of Even Start In-Depth Study Projects	18
	Characteristics of Families in In-Depth Study Projects	18
	Overview of Project Activities	19
	Synthesis of Implementation Activities and Issues	21
	Changes in Service Delivery Strategies from 1991 to 1993	34
Chapter Four	Characteristics of Even Start Participants: Who is Served by Even Start?	39
	Number of Participants	39
	Characteristics of Participating Families	39
	Characteristics of Participating Adults	45
	Characteristics of Participating Children	56
	Comparison With Head Start and CCDP	63
	Characteristics of Limited English Proficient Adults	64
	Need Level of Even Start Adults	66
	Project Variation in Population Served	68

Contents

Chapter Eight	Effects of Even Start Projects on Children	157
	School Readiness as Measured by The PSI	157
	Child Literacy as Measured by The PPVT	165
	Child's Emergent Literacy Test	174
	Effect of Parenting Education on Children's Language	175
	Effect of Service Variations on Child Outcomes	180
	Conclusions About Effects of Even Start on Children	181
Chapter Nine	Effects of Even Start Projects on Parent Literacy	183
	Functional Literacy of Adults as Measured by The CASAS	183
	Attainment of A GED Certificate	192
	Reading and Writing Activities in the Home	198
	Conclusions About Effects of Even Start on Parent Literacy Skills	201
Chapter Ten	Effects of Even Start Projects on Parenting Skills	202
	Adults' Personal Skills	202
	Home Learning Environment	204
	Parent-Child Reading Task	211
	Parents' Expectations for their Children	213
	Conclusions about Effects of Even Start on Parenting Skills	216

Preface

The National Evaluation of the Even Start Family Literacy Program was a four-year national effort designed to describe the types of Even Start projects that were funded, the services provided, the collaborative efforts undertaken, and the obstacles to program implementation that were encountered. The evaluation also describes the families that participated in Even Start, the services they received, and the effects of Even Start participation on children's school readiness; parent's literacy, parenting, and personal skills; and family stability and resources. Finally, the evaluation provided assistance to Even Start projects to conduct locally-designed evaluations, and to prepare and submit applications to the Department of Education for entry into the National Diffusion Network.

This is the final report from the National Even Start Evaluation. It provides descriptive information about the first four cohorts of Even Start projects (340 projects first funded in the fall of 1989, 1990, 1991 or 1992), as well as findings about program impacts based on data from the first two cohorts of projects (120 projects first funded in the fall of 1989 or 1990).

To be eligible for Even Start, a family must have an adult who is eligible to participate in an adult education program under the Adult Education Act, and who is a parent of a child under than eight years of age who lives in a Chapter 1 elementary school attendance area. Even Start projects must provide participating families with an integrated program of early childhood education, adult basic skills training, and parenting education. The program's design is based on the notion that these components build on each other and that families need to receive all three services, not just one or two, in order to effect lasting change and improve children's school success. As a "family-focused" rather than parent- or child-focused program, Even Start has three interrelated goals:

- to help parents become full partners in the education of their children,
- to assist children in reaching their full potential as learners, and
- to provide literacy training for their parents.

Even Start began as a federal demonstration program administered by the U.S. Department of Education (ED) that provided school districts with four-year discretionary grants for family literacy projects. According to the Even Start statute, when the program is funded for $50 million or more per year, it must be administered at the state level. Thus, in 1992, most grant-making responsibilities were delegated to the states although the federal government remained responsible for grants for Migrant Education projects and grants to Indian tribes and tribal organizations. Each state's share of Even Start funds is based on its proportion of Chapter 1 Basic Grants funds. States hold grant competitions and make subgrant awards. The statute specifies that each Even Start subgrantee must receive a minimum of $75,000 per year. Exhibit 1.1 summarizes Even Start's funding history and Exhibit 1.2 shows the location of Even Start projects first funded in the fall of 1989, 1990, 1991, or 1992.

Exhibit 1.1

Even Start Funding History

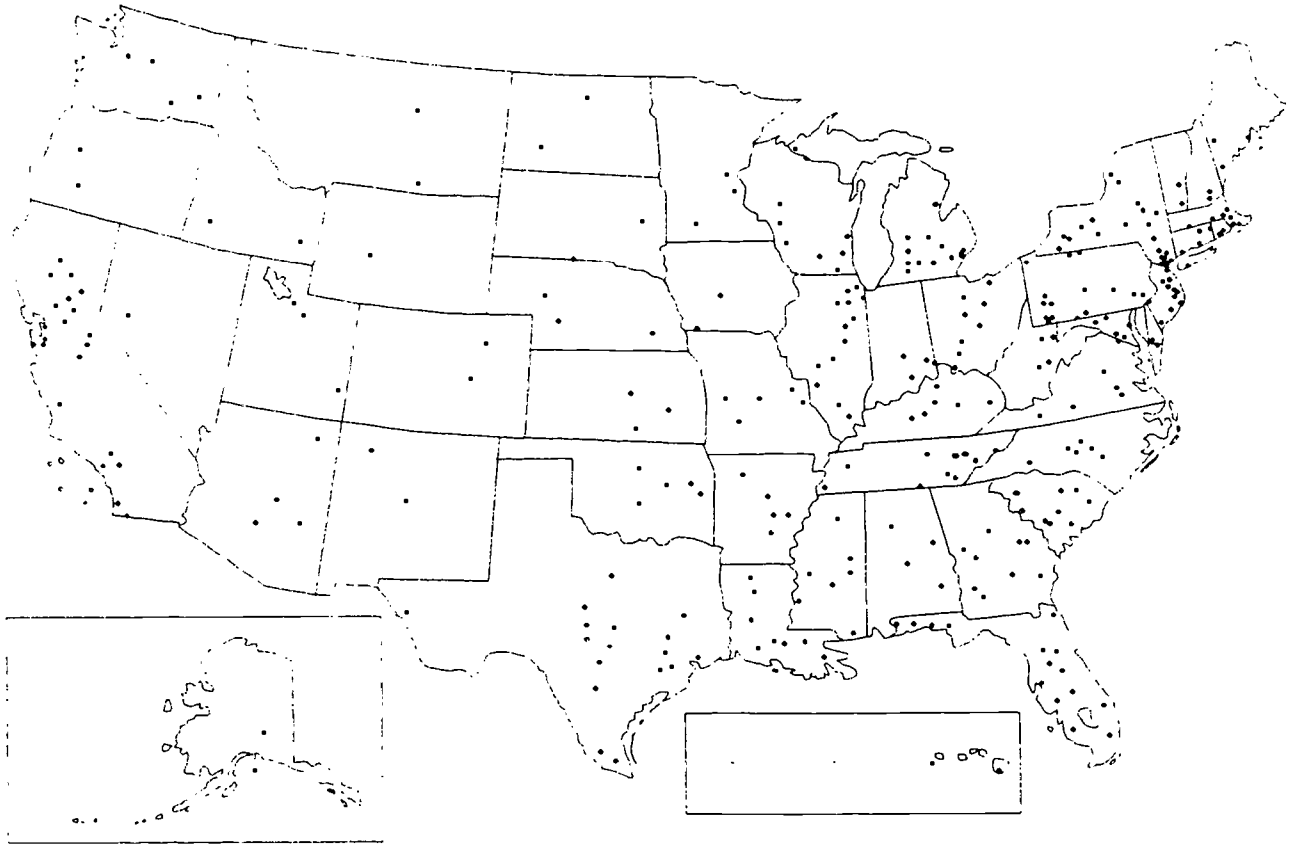
Fiscal Year	Federal Funding	Number of Projects
1989	$14,820,000	76
1990	$24,201,000	123
1991	$49,770,000	234
1992	$70,000,000	340
1993	$89,123,000	440
1994	$91,373,000	450

Exhibit reads: In fiscal year 1991, $49.8 million of federal funding was used to provide Even Start grants to 234 local projects.

Source: U.S. Department of Education, Office of Policy and Planning.

Exhibit 1.2

Location of Even Start Projects
(Projects First Funded in 1989, 1990, 1991, and 1992)



Source: U.S. Department of Education, Office of Policy and Planning, April 1994.

Mandate for the Evaluation

Section 1058 of the Even Start legislation required an independent national evaluation of the projects funded under Even Start. This section reads as follows:

> *(a) Independent Annual Evaluation. The Secretary shall provide for the annual independent evaluation of programs under this part to determine their effectiveness in providing:*
>
> *(1) services to special populations;*
> *(2) adult education services;*
> *(3) parent training;*
> *(4) home-based programs involving parents and children;*
> *(5) coordination with related programs; and*
> *(6) training of related personnel in appropriate skill areas.*

Chapter Two

Design of the Program and the Evaluation

This section describes the basic design of Even Start programs as well as the design of the evaluation. Subsections include:

- Even Start Program Design
- Research Questions for the Evaluation
- Components of the Evaluation

Even Start Program Design

The Even Start legislation mandates the major components of each local Even Start project. However, the legislation allows grantees great flexibility in devising projects to meet local needs. For example, Even Start encourages local staff to draw on available program models and to collaborate with existing service providers to create projects that are tailored to the needs of local families. Hence, Even Start can be regarded as a "family literacy laboratory" in which many different strategies are being tried.

Exhibit 2.1 presents a conceptual model of Even Start, depicting the types of activities conducted and the causal chain anticipated as a result of those activities. Projects are characterized as having a set of program inputs that influence program processes, which in turn produce outcomes for parents and children. At each level (inputs, processes and outcomes), a set of contextual variables act as mediators. Examples of measurable indicators are provided for each major set of variables shown in the model.

The model shows that local projects can vary in many ways. For example, projects must make decisions about what services to provide directly and what services to provide through referrals, priorities for targeting children and adults (e.g., age of child, family language), the extent to which core services for families are to be integrated (e.g., whether activities in parent education should reinforce learning in adult education), whether to use an existing educational model and materials for delivering early childhood and adult basic education services, strategies for recruiting and retaining program participants, the role that parents play in the project, and staff development activities.

Even Start projects are designed to use and build on existing educational and social services. Federal Even Start funds are to be used to coordinate existing services as well as to provide services which are not locally available. Many Even Start projects use case managers, parent liaisons, or family advocates as key staff in the provision of coordinated services. Case managers conduct needs assessments and have ongoing contact with a number of families at centers and through home visits. They are responsible for the direct

provision of some services as well as for ensuring that participating families take advantage of other services.

Even Start law requires that projects provide three core services:

- **Early childhood education** to meet the early education needs of children from birth through seven years of age, designed to enhance development and prepare children for success in school.

- **Adult education** to develop the basic educational and literacy skills of the adult including adult basic education (ABE), adult secondary education (ASE), English as a second language (ESL), or preparation to attain a General Education Development (GED) certificate.

- **Parent education** to enhance parent-child relationships and help parents understand and support their child's growth and development.

ED regulations require that each family will participate in all three core services. Projects are free to choose the specific instructional strategies used in each of these core service areas. In addition, Even Start projects can decide to focus educational activities for children on a narrower age span than the birth through seven range that is required to be served by the legislation. Finally, Even Start projects are required to provide some core services to parents and children in joint sessions and to provide home-based services that are instructional in nature.

Even Start projects must build on existing local services. Thus, depending on available services, any or all of the core services may be provided by staff funded through Even

It is also hypothesized that Even Start will have a positive impact on children's school readiness and school achievement. School readiness variables include age-appropriate cognitive, language, and social skills. Once children enter school, outcomes might include satisfactory school performance, and improved school attendance, as well as a lower incidence of special education, remedial placement, and retention in grade.

What differentiates Even Start from Head Start and other "child-focused" programs is Even Start's dual focus on both adults and children in the same family. Even Start's hypothesis is that short- and long-term effects on children will occur both directly, through the provision of early childhood education services, and indirectly, through effects on their parents.

Research Questions for the Evaluation

Presented below is a comprehensive set of research questions that guided the evaluation

What is the relationship between amount of home-based services, amount of parent/child together services, length of participation, and outcomes for children? Outcomes for parents?

How do parents' attitudes/expectations, basic skills, and patterns of parent-child interactions relate to children's school readiness or achievement?

Do adults participating in Even Start have better retention and/or attendance in ESL or ABE programs than adults in regular adult education programs?

Based on information about the services provided, is it possible to identify a set of Even Start "models" that exhibit variation in design and service delivery? Are some Even Start models more effective than others in terms of enhancing adult basic skills, children's school readiness, and parents' behaviors and expectations? Are some Even Start models particularly cost-effective?

Across Even Start projects, are there practices or components that are particularly effective?

In addition to the above questions, which were used to help design the evaluation, the Department of Education raised other research questions during the life of the project. Not all of these newer questions can be directly answered by data collected for this project.

How well was the federal funding on the program spent?

How many of the projects were well-implemented?

What are project "best practices?" What types of projects or program elements work best under what conditions?

How does the program compare to alternative programs addressing the same problem? Is it more effective? How do the costs compare?

What is the program's impact on its target population and service delivery structure?

How well does the basic Even Start model work?

Components of the Evaluation

A four-component evaluation was designed in order to address the questions listed above (see Exhibit 2.2). The components include: (1) the National Evaluation Information System (NEIS) for all Even Start projects, (2) an In-Depth Study of ten projects, (3) other

Exhibit 2.2
Components of Even Start Evaluation

Evaluation components	Population on which data are collected	Types of data to be collected	Data collection procedures	Years collected	Basic research questions	Analysis plan	Funding source for data collection	Funding source for data analysis
National Evaluation Information System (NEIS)	All Even Start projects and participants	Participant characteristics, coordination, services, implementation, costs	Parent Quest., Family Service Log, Project Quest.	All years	Who participated? How is the program implemented? How much service is received?	Descriptive analysis, review against Even Start goals	Local project evaluation	Abt/RMC
		Outcomes: school readiness, adult literacy skills, parent/child interaction	Child and adult tests (PSI, PPVT, CASAS), parent interviews	2nd-4th	What is the school readiness status of children? What is the literacy level of adults? Do adults attend adult education regularly?	Compare participants' status and progress to norms and other programs for similar populations	Local project evaluation	Abt/RMC
In-Depth Study	Ever Start participants and control group from 10 selected Even Start projects	Participant characteristics, coordination, services, implementation, school performance, adult literacy, parent/child interaction, costs	Observation;in-depth data on participants and services;parent and staff interviews; design for longitudinal study of children	2nd-4th	What are the short and long-term effects of Even Start on children, parents, and families? What models work best? What aspects are key to success?	Compare against control group data and against data from other national programs	Abt and local project evaluation	Abt
Local models evaluation (PEP/NDN qualification)	Even Start projects that qualify Even Start participants and comparison/control group, if appropriate	Participant characteristics, coordination, services, implementation, costs school readiness, adult literacy, parent/child interaction	Testing and parent interviews	3rd-4th	Is the project exemplary? Is it a transferrable model?	Compare gains within the project to those of similar local families or to national norms	Local project evaluation	Local project evaluation
Other local evaluation needs	Conducted at local level	Additional information desired by local administrators	Proposed in project application	All years	How does the project meet specified local needs?	Depends on questions	Local project evaluation budget	Local project evaluation budget

Exhibit 2.3 Summary of Cohort 3 and 4 Data Submissions	
Form of Submission	**Percent of Projects**
On-Disk Only	53%
Hard Copy Only	14%
Both Disk and Hard Copy	16%
Serving No Families[1]	6%
Late/No Submission	11%
TOTAL	100%

[1]These were projects in their first year that received funding late in the year and were not yet enrolling families by the date of data submission.

- The In-Depth Study was implemented with 10 projects, purposively selected from the first cohort of 73 Even Start grantees.

- Projects were selected based on a number of criteria, including geographic location, level of program implementation (e.g., providing full range of Even Start services, program fully operational) and willingness to participate in the In-Depth Study.

- Families were randomly assigned to Even Start or to a control group in as many of the In-Depth Study projects as possible. Five of the ten In-Depth Study projects implemented random assignment. Where random assignment was not possible, no comparison group was assigned. The five non-randomized projects contributed information to the descriptive and cost components of the study.

- The In-Depth Study plan called for about 20 Even Start families and 20 control group families in each project. In total, sample sizes were about 200 Even Start families (20 per project for ten projects) and 100 control group families (20 per project for five projects).

- The In-Depth Study sample focused on families with children three or four years old. Project staff used this as a criterion for recruiting families to participate in the study.

- Recruitment of families occurred in the summer/fall of 1991, assignment to groups and pretest data collection occurred in the fall

of 1991 through January 1992. Posttest data were collected in the summer of 1992 and again in the spring of 1993.

- Site visits by Abt staff were conducted in the spring of 1991 (to describe programmatic activities), in the spring of 1992 (to describe program costs), and again in the spring of 1993 (to obtain project director's reflections on Even Start).

Other Local Evaluation Activities

After grantees met requirements for the National Evaluation Information System and the In-Depth Study, they were free to conduct other local evaluation activities. Local evaluation activities could be funded through the projects' evaluation budget, but had to be approved by the Department of Education, typically through the continuation grant.

Local Application for PEP/NDN Qualification

The final component of the evaluation was primarily the responsibility of individual Even Start grantees. In accordance with Section 1058(c) of the Even Start legislation, a goal of Even Start was that projects should submit evidence of their effectiveness for approval by the Department of Education's Program Effectiveness Panel (PEP). Approval by PEP results in entry to the National Diffusion Network (NDN) and national recognition as a model program worthy of emulation. After entry to NDN, the project may apply to NDN for additional dissemination funds as a developer/demonstrator project.

Starting in 1993, Even Start projects also could apply to a new NDN dissemination center on family literacy in order to obtain approval and recognition of their program. The National Center for Family Literacy in Louisville, Kentucky now has authority to identify exemplary family literacy projects for inclusion in the National Diffusion Network.

Chapter Three

Description of Even Start In-Depth Study Projects

To help readers understand how Even Start projects operate, this section describes the characteristics of participating families in each of the ten In-Depth Study projects as well as the programmatic activities undertaken in each project during the 1990-91 program year. More complete descriptions appear in the technical appendix to this report.[1] This section includes the following topics:

- Characteristics of Families in In-Depth Study Projects
- Overview of Project Activities
- Synthesis of Implementation Activities and Issues
- Changes in Service Delivery Strategies from 1991 to 1993

Characteristics of Families in In-Depth Study Projects

Exhibit 3.1 summarizes the characteristics and number of families participating in the ten In-Depth Study Even Start projects during the 1990-91 program year. These projects serve families with a range of racial/ethnic characteristics, including Hispanic, black, white, Native American, Hmong, and Afghani families. Four projects (Birmingham, Billings, Reading, and Richmond) have the capacity to accommodate between 30 and 50 families in the program at one time. Three projects (Phoenix, Indianapolis, and Estill) serve 60 to 70 families. Golden and Albuquerque are larger projects, with 90 to 100 families participating, and Waterville is the smallest program with 20 to 25 families maximum.

Exhibit 3.1 also shows the ages of the children targeted for educational activities. Most projects offer some activities or services for all children in the full Even Start age range as well as special events for all family members. Some of the projects focus on a narrower age range for structured educational activities with children. Typically, projects offer classes for preschool children who are between three and five years of age.

[1]These descriptions were written based on 3-day site visits to each of the 10 projects during the spring of 1991.

Education Center. Home visits take place once a week for an hour; parent meetings or "group home visits" take place once a month at one of the housing projects.

Phoenix, Arizona. Program activities revolve around preschool classes for children ages three and four that are held in portable classrooms on the campus of the Butler Elementary School. Parents volunteer in their child's classes at least twice a month; attend parent workshops at least twice a month; and participate in "Read-to-Me" sessions once a month. ESL and GED classes are provided in the evenings by the Rio Salado Community College, with Even Start staff providing child care. For adults who are reluctant to go to classes or not ready for GED instruction, there is one-to-one literacy tutoring available through the local chapter of the Literacy Volunteers of America. Home visits are conducted by the early childhood education teachers and aides once a month for families of four-year-olds and once a week for families of three-year-olds.

Golden, Colorado. This Even Start project is based on a case management model in which five parent liaisons work with 18 to 20 families each to help adults participate in adult basic education classes and enroll children in early childhood education classes. In addition, the liaisons plan and implement parenting activities during biweekly home visits. The project collaborates with the Jefferson County school district to provide adult education, paying tuition for adults to attend the district's ESL, GED preparation, or high school diploma programs. Preschool age children attend one of the district's Language Development preschools, Head Start, or day care.

Indianapolis, Indiana. The Indianapolis Even Start project is an adaption of the Kenan Trust Family Literacy Project model where parents and children attend educational programs at the same site. Parents and children attend classes four afternoons or four mornings a week. While parents are in adult basic education classes, their three- and four-year-olds are in a preschool based on the High/Scope curriculum. Parents spend one half-hour in their children's classroom each day working on activities together. One hour per week parents meet with a social worker for a group discussion on parenting issues or to hear a guest speaker. Home visits are conducted on Fridays by two-person teams; each family receives a home visit about every six to eight weeks.

Waterville, Maine. This is primarily a home-based project. Adult basic education, parenting, and parent-child activities are all provided by home visitors, with the curriculum tailored to the needs of each family. All together, each family is visited for between four and ten hours a week by two or three different visitors. There also are monthly potluck suppers for the whole family and parent discussion groups without the children. The project collaborates with Head Start to provide a structured early childhood program.

Billings, Montana. The project offers educational activities for children from birth through age five at the Even Start center. While children are in classes, their parents receive adult education at the school district's Adult Education Center a few miles away. The program also works closely with the JOBS program, and offers child care and parenting classes for JOBS participants who are taking adult basic education classes at the adult high school. Parenting workshops led by Even Start family advocates take place at the center

Albuquerque, New Mexico. Project activities center around the Even Start sites at two elementary schools. At each site, there are half-day preschool classes twice a week for children ages three to five. For children one and two years old, the early childhood education teachers do home visits. Adult education options include ESL and GED classes at the Even Start sites provided by staff from the Albuquerque Technical-Vocational Institute and Southwestern Indian Polytechnical Institute. In addition, tutoring is offered by the Albuquerque Literacy Program, an affiliate of Literacy Volunteers of America. Parents have a choice of activities to consider in order to complete the parent education component, including monthly parent meetings and volunteering in their child's classroom.

Reading, Pennsylvania. The Reading Even Start Project offers activities for parents and children at four community sites, including elementary schools and a local community college. Parents attend GED and ESL classes while their children are in the Even Start early childhood education component. The project serves children in the full range from birth through age seven, and all of the classrooms have mixed age groupings. Classes are offered in the morning or afternoon three or four days a week, depending on the site. Parent education takes place during parent discussion groups, parent-child time in the classroom, and home visits.

Estill, South Carolina. The Estill Even Start project is structured sequentially in four time cycles. Each cycle has a different emphasis: Cycle One, offered during October and November, focuses on parenting; Cycle Two runs from November through January and provides Life Skills; Cycle Three provides computer skills and literacy/GED training from January to June; and Cycle Four is the summer program offered during June and July. The project focuses on children who are four and five years old. Children attend either the district kindergarten or Head Start classes while their parents participate in the various nine-week segments. Even Start staff conduct monthly home visits to check in with families and share instructional materials.

Richmond, Virginia. The Richmond Even Start project provides adult education and early

Adult Education

Adult Education Activities. Even Start projects offer a range of activities designed to enhance adult basic skills. Almost all projects report that they provide services for adults to attain a GED certificate; a majority of projects also offers services in adult basic education and adult secondary education. Many projects offer services in English as a second language.

The ten In-Depth Study projects offer a range of activities to enhance adult basic skills. All programs have special features that they use to augment their adult education program and make it more responsive and appealing to adult learners. Exhibit 3.2 lists some of the special features of the adult education programs in these ten sites, including computer labs, literacy volunteers, writing programs, academic counselors, parent newsletters, home-based instruction, and credit for life experiences.

A number of projects incorporate computers into their instructional program for adults. In Birmingham and Estill, adults use the IBM PALS program. The PALS curriculum is a 100-hour instructional program designed to teach computer and literacy skills to students who read at or below the fifth-grade level. In Indianapolis, the adult education classes use computers purchased with a grant from the National Center for Family Literacy and Apple Computers. Students use the computers for math, geography and word-processing skills. The computers are linked to the Even Start project in Oregon, which also has an Apple grant, and the two projects have instituted a pen pal program among adults. In Reading, adult learners use computers to create monthly newsletters.

Several of the Even Start programs incorporate real-world reading materials into adult education classes. In Indianapolis, the adult classroom receives USA Today that students read daily and Classline Today, a one-page list of questions and projects linked to USA Today that students complete as homework. The Even Start project in Albuquerque receives from local publishers 100 copies of newspapers that they send home with the children. The project has run workshops for parents on how to use the paper and tries to get two pieces of literacy materials into the home each week. The "Life Lab" in the Richmond project illustrates another way that newspapers can be used to encourage reading and thinking skills.

Adult Education Challenges. One of the challenges of adult education expressed by staff is the extent to which it focuses on GED preparation. Some programs offer adult education classes specifically geared to the GED test and incorporate GED workbooks into adult education classes, while others provide general instruction in basic skills such as reading, writing and math. Some project staff have expressed concern that attainment of the GED certificate is seen as a key outcome of the success of Even Start, yet for many adults the GED is a long-term or possibly even unrealistic goal.

When to offer the adult education activities also has been a challenge for some projects. A number of sites offer adult education classes during the day when children are in early childhood classes. This option has several advantages: transportation arrangements can be coordinated for adults and children; the early childhood program may meet parents'

Writing a Newsletter in Reading, Pennsylvania

The adult education classroom at the Amanda Stout elementary school is located next to the children's classroom and has several rectangular tables where parents work. Five women are working on a monthly newsletter. Two women are sitting together at one table writing their stories out on lined paper and referring to the dictionary placed on the table between them for help with spelling. Another woman is working on an Apple computer, entering her story and selecting the graphics to accompany the words. The women are chatting in Spanish but writing in English. The teacher moves from one table to the next, offering help and suggestions to the adult learners.

On the wall of the classroom are sample stories from previous newsletters. In some articles, parents write about outings with their children and weekend visits to family members, illustrated with pictures of butterflies and kites. Other articles include personal descriptions and family recipes. All of the articles have bylines or other statements identifying the authors.

Parent Education

Parenting Education Activities. Parent education activities include group discussions, hands-on activities, home visits, and guest speakers. Projects tend to use materials from a variety of curriculum sources rather than relying on one source exclusively. Some of the commercially available materials that are used include Bowdoin Parenting Education, Systematic Training for Effective Parenting (STEP), Dorothy Rich's "Megaskills," and Head Start's "Looking at Life." The frequency of activities varies across the ten In-Depth Study sites from one hour a week of regularly scheduled activities to special parent meetings once a month.

Parent-child activities and home visits also enhance parents' knowledge and skills. Exhibit 3.3 summarizes the frequency and types of parent-child activities offered in the ten In-Depth Study sites. Examples include center-based activities with parent volunteers in classrooms, pot luck suppers, and evening meals.

Exhibit 3.3

Parent-Child Activities in In-Depth Study Projects (1990-91 Program Year)

Project	Center-Based Activities	Home-Based Activities
Birmingham, AL	Volunteer in the ECE classroom once/month	Weekly home visits; monthly "group" home visits at housing project
Phoenix, AZ	Monthly "Read-to-Me" sessions; volunteer in ECE classroom twice/month	Weekly home visits for parents of 3-year-olds; monthly home visits for parents of 4-year-olds
Golden, CO	--	Home visits twice/month

"Life Lab" in Richmond, Virginia

Parents start the first half-hour of each day in "Life Lab," where they read the morning paper. The class is divided into three groups, each with four or five women sitting around a table. Every adult has a copy of the Richmond daily newspaper and each table has a dictionary. Participants help themselves to coffee from a large pot on one side of the room.

The groups discuss different issues presented in newspaper articles. At two of the tables, adult education teachers serve as facilitators. At the third table, the Even Start adults are running the discussion themselves because one teacher just left on maternity leave. As one group reads an article about taxes, the adult education teacher offers information about different types of taxes and the uses of this money for public services. Another tables is reading an article about a local crime. Morning discussions may range from current events to comments about sales or coupons at local stores. Each student takes the paper home at the end of the day.

Phoenix runs monthly "Read-to-Me" sessions, described below, that serve multiple purposes of emphasizing reading, encouraging parents and children to spend time together in educational activities, and getting more reading materials into the families' homes.

Home visits provide an opportunity for project staff to interact with parents and children in a less formal way than in a structured classroom. Many staff described the benefits of going to families' homes, such as getting to know the whole family and letting parents know that they care enough to come to their home. All of the In-Depth Study projects conduct home visits, with the exception of Richmond. These home visits generally have multiple purposes that include modeling for the parent some educational activity with the child, leaving toys and books in the home, and maintaining contact with families. A description of a home visit in Indianapolis is presented below.

A number of projects encourage or require parents to volunteer in their child's classroom which fosters positive interaction with their own children and use of appropriate activities to enhance their young children's development. Three of the projects incorporate Parent and Child Together (PACT) time, a feature of the Kenan model of family literacy programs, into their program and have parents spend between 30 and 45 minutes every day in their child's classroom working on activities together. In Indianapolis, the joint parent-child activities for PACT time are chosen either by the child, the parent, or the teacher. Because staff realized that parents became bored when their children always select the same activity, they have parents select the activity on one day, the children on two days, and the staff on one day each week. In Richmond, the specific activities that parents

work on during PACT time are planned by the early childhood teachers in concert with the adult education teachers. The children also have some say in the specific activities and often choose activities before their parents arrive.

A "Read-to-Me" Session in Phoenix, Arizona

The parent-child activity, led by two early childhood education teachers, is attended by about 15 mothers and 20 children. The mothers and their children sit together around tables in the preschool classroom. Younger siblings are in the next room with three classroom aides. The theme is "peek-a-boo" books (i.e., books where someone or something is hiding either literally under a flap in the book or somewhere in the picture). The teachers read three books to the group, going page by page and asking questions along the way, encouraging children to get involved (and they do--calling out answers, telling where objects are hiding). The session is a mixture of English and Spanish.

After the stories are read, the parents and children make their own peek-a-boo books to take home. Parents have the choice of making a book with English or Spanish text. The teachers explain to the parents how to make the book, pass out all the materials that they need, and encourage the parents to let it be a joint activity with their children. The materials include paper printed with a sentence identifying a hidden object, "flip-up" pieces of paper that the teachers and project director made with a die-cut machine, and stickers of the objects named on the page. The goal of the session is to have the parents read the text to the child and have the child select the sticker that matches the text.

When all of the pages are complete, the mothers use yarn to bind the pages into a book. This turns out to be a difficult task for some mothers, and there is a lot of discussion and help rendered by mothers at the same table. The teachers also circle around to help. The session lasts about an hour, with parents and children taking their new book home.

Parenting Education Challenges. Staff from several projects discussed the profound need that participating families have for social services. Some projects employ social workers to address these needs. In other sites, staff felt that it would be a great help to have a professional social worker available for families. In many sites, staff talked about the extra roles and responsibilities they take on to help families negotiate with local educational, medical, or social service agencies. Staff also discussed their concerns about the need to help families without "coddling" them, and the importance of being open with families while keeping some professional distance.

It seemed clear that staff were compassionate and wanted to help families overcome the many problems they face, yet additional roles beyond teacher or home visitor could easily become overwhelming for staff. This is an area where Even Start project directors must make important resource decisions. Some projects have chosen to hire social workers specifically to deal with social service needs, while other projects expected that these tasks could be assumed by staff with training in early childhood education or adult education. It is not clear which approach is more effective, and it is likely that the best approach for a given site depends to a great extent on the characteristics of the population being served.

Projects that include joint parent-child time in the early childhood classroom described this activity as both a benefit and a challenge of the program. As one early childhood teacher commented, parent-child time is the "heart" of the program that makes it unique and, without it, "this would be just another program for disadvantaged children." Yet at the start of the year, staff report it is hard to get parents and children to play together because parents may be uncomfortable or unsure of how to play with their children or reluctant to let children do things like using scissors on their own.

Early Childhood Education

Early Childhood Education Activities. The Even Start projects in Phoenix, Indianapolis, and Richmond base their preschool classrooms on the High/Scope curriculum which centers around key areas of cognitive development such as language, representation, classification, seriation, numbers, spatial relations, and time. The district preschools with which Estill collaborates also are based on High/Scope. The curriculum gives children the opportunity to make choices at all times by building classroom activities around a sequence of "Plan/Do/Review": "Plan" is when children choose their activities, "Do" is the work part of the day, and "Review" is recalling what activities took place. The High/Scope curriculum also encourages the use of "life size" materials in the classroom such as real cereal boxes, telephone books and full-size pots and pans in the housekeeping area.

Another manifestation of the High/Scope model is the use of labels and symbols in the room. For example, in Indianapolis, on the shelves that hold art materials, there are pictures of crayons under the crayon boxes; on the shelves where the blocks are stored, there are different shapes of paper taped to the shelves to correspond to the various shape blocks. The symbols help children put things back in the right place and also reinforce cognitive matching skills.

The early childhood classes in Birmingham and Albuquerque incorporate similar planning strategies. In Birmingham, the preschool children choose play centers such as the sand table, kitchen area, or manipulative toys. The teacher specifies how many children can be in each center and the children tell her where they want to work. The teacher puts on music during play time and the children know that when the music is turned off, it is time to clean up from that activity and gather for group story reading. In Albuquerque, classroom activities revolve around small group activities, called "committees," that the

Exhibit 3.4

Staffing Arrangements Among In-Depth Study Sites (1990-91 Program Year)

Project	Adult Education	Parent Education and Parent-Child Activities	Early Childhood Education
Birmingham, AL	District teachers	Even Start facilitator; district parent education coordinator; Even Start home visitors	Even Start teachers
Phoenix, AZ	Community college teachers; literacy volunteers	Even Start ECE teachers	Even Start teachers and aides
Golden, CO	District ABE teachers	District ABE teachers; Even Start parent liaisons	District preschool and Head Start teachers
Indianapolis, IN	Even Start teachers	Even Start social workers; ABE teachers and ECE teachers	Even Start teachers and aides
Waterville, ME	Even Start home visitors; district ABE teachers	Even Start home visitors	Head Start teachers
Billings, MT	District teachers	Even Start family advocates	Even Start teachers
Albuquerque, NM	Community college teachers; literacy volunteers	Even Start ECE teachers	Even Start teachers and aides
Reading, PA	Even Start teachers; community college teachers	Even Start ABE and ECE teachers and home visitor	Even Start teachers and aides
Estill, SC	Even Start teachers; district ABE teachers	District teachers; Even Start project director and social worker	District and Head Start teachers
Richmond, VA	Even Start teachers	Even Start ABE teachers; Richmond Early Learning Center teachers	Richmond Early Learning Center teachers and aides

the floor, turning off the TV, and keeping interruptions to a minimum. The program also makes a special home visit to families that have missed four classes without a reason; if attendance does not improve, a letter is sent telling the family they will be dropped from the program if they do not come to classes. While project staff are always reluctant to have families drop out of the program, they recognize it is necessary when families are no longer actively participating in order to offer that slot to other interested families.

Projects also provide tangible rewards for participation. In Birmingham, where staff found that attendance was hardest to maintain during the summer, parents were given prizes, such as a fan or books, for participating in parenting classes. In Albuquerque, in addition to giving out newspapers, evening parent meetings included a brief award ceremony where parents are given t-shirts for perfect attendance. In Richmond, parents who maintain good attendance for two to three weeks get a paperback dictionary to take home. On-time attendance for two days in a row also earns a $1 certificate in the Even Start "store" where parents can buy deodorant, detergent, toothpaste, vitamins, and other items they have requested.

Other incentives to participate are woven into program activities. For example, in Estill, where families come from a distance of 30 miles to the classes, the evening sessions start with a dinner where parents, children, and staff eat together. In Indianapolis, the project stresses the importance of recognizing that parents are students. The project has set up a separate lounge where they can smoke and has installed vending machines outside the adult basic education classroom so that parents can bring soda and snacks into class. Reading established a Parents' Council, which consists of two parent representatives from each of the four sites, that meets every two months with the program administrative aide/van driver and the home visitor to give parents a chance to express their concerns and offer suggestions.

Special events are another way that programs try to connect with families. In Phoenix, a Saturday family outing, paid for by the Coors Literacy Foundation, attracted about 220 people. A local puppet theater provided entertainment, local newspaper women showed the adults how to use the newspaper in everyday life and each family was given a year's subscription to the local paper (worth about $100). In addition, a church gave each family three books.

Two projects have started a mentoring program linking parents with adults from the community. Indianapolis began a mentoring program as a way to provide as much support as possible to adults in the program, to provide positive role models, and to increase retention. The project developed a packet of information that describes the mentoring program, outlines the role of the mentor for parents, the parent's responsibilities, the guidelines and ground rules for mentors, and the rationale for the mentoring program. For example, the materials tell both the parents and the mentors that the relationship is one of sharing thoughts and feelings and should not involve loaning money or buying things for the families, and informs the mentors that any concerns about the families or need for social services should be directed to the Even Start social workers. In Richmond, a few students meet with black women who are part of a mentoring program from the Junior League and talk about job skills.

Changes in Service Delivery Strategies from 1991 to 1993

A set of one-day follow-up site visits was conducted in the spring of 1993, two years after our initial visits to the In-Depth Study projects. We found that during this period, all projects had refined, modified, and revamped program activities in order to improve the services offered to families. We summarize below the areas in which projects changed their service delivery--ranging from the content of adult or early childhood education to the processes by which families participate to the staff who provide services.

Content of Core Services

In all In-Depth Study sites, project staff agreed that the mission of their program has remained the same, but that they continue to find ways to improve services provided to families. For example, in Reading, the early childhood education staff began to use the Child Observation Record system developed by High/Scope, and several of the early childhood staff have rearranged their classroom environments after attending a High/Scope workshop. In Billings, the staff-child ratio has improved, which has allowed the staff to introduce more variety into the educational activities, especially with the younger children. The Estill project has added a program component for older siblings that focuses on building self-esteem; the group meets weekly with the social worker.

In many projects, staff continue to work to align parenting education more closely with other core services by scheduling debriefing meetings for the project staff to discuss families' needs, or to integrate the content of early childhood education lessons into parenting discussions more completely. The Birmingham project conducts an annual needs assessment to learn from the parents what they would like to have covered in parenting education sessions.

In Richmond, the adult education staff has built more flexibility into the schedule for parents so they can choose which subjects to study. Albuquerque, Phoenix, and Birmingham are continuing to work with collaborators who provide adult education services to improve the fit between what other agencies provide and what the Even Start projects would like for their adult participants.

Recruitment and Retention

For most sites, recruitment has become much less of a chronic concern because projects have established networks within their local communities and are known to families and schools as well as to other service providers. In several sites (Birmingham, Golden, Billings, Richmond), close collaboration with local JOBS programs has increased the pool of potential participants, and has eased recruitment challenges. But for two projects, recruitment has been an issue over the past year, because the projects themselves are uncertain about their future. Project staff in Golden struggle with decisions about recruiting participants who could be meaningfully served in a year's time, and Waterville

staff are focusing their efforts on the families already participating in the project rather than adding new families.

Retention was mentioned by several projects' staff as an ongoing issue. A number of staff commented that the more mature the parent the greater the likelihood of a meaningful commitment to participate. One strategy used to increase retention is to establish attendance requirements, and families who do not meet the standard are dropped by projects. Staff also mentioned that because recruitment has become less of an issue, it has been easier to drop those families who have not met their commitments. Some projects also provide incentives to children and parents for good attendance. Parents at the Reading site developed a system whereby parents must notify other parents--who serve as monitors--if they are not able to attend a session; this has helped improve attendance a great deal.

Staffing

The project directors across all ten sites have remained in their jobs, although there has been one change in the project director position, in Billings. Other staff have also remained fairly stable, with some attrition but with a core group of staff remaining. In all 10 sites, there has been a group of core project staff for the duration of the project, which contributes to the projects' continuity.

Strengths and Challenges

Staff discussed several strengths of the Even Start program, including:

- The flexibility of the Even Start model -- because the model itself can change in response to participants' needs, the model can continue to serve its participants.
- The family-centered focus of the program which can accommodate needs of parents and children simultaneously.
- The collaborations -- projects are able to pull resources together for families in ways that other individual service agencies had not been able to do.
- Project staff are viewed as a source of strength for the project.
- Home visits -- staff in projects that rely upon the case management approach (Billings and Golden) or use home visits as a primary mode of service delivery (Waterville) believe that the home visit component represents a significant advantage of the Even Start model.

- The length of the program allows participants and staff the opportunity to establish meaningful relationships; families who have not easily trusted service providers have a chance to become comfortable with educational institutions.

Challenges implementing the Even Start program include:

- Support services -- projects cannot afford to provide complete coverage in such areas as child care or transportation and it is difficult to get these services through collaborations. This is more of a problem in projects that operate in multiple sites or on a staggered schedule.

- Space is difficult to find, particularly in oversubscribed schools and community centers, not only in terms of sufficiency but in terms of appropriateness for either young children or for adults.

- Heterogeneity of participants -- the ages of children range from infancy to preschool, and teachers have to cope with widely divergent developmental levels. For adults, teachers have to work with students with varied backgrounds in English language proficiency, in goals for participation in Even Start, and in commitment to the project.

- Uncertainty of the future -- several directors commented that they have encouraged their staff members to seek other employment because they could not offer any job security.

Effectiveness of the Project

A reduced need to recruit actively was mentioned by nearly all project directors as one indication of effectiveness. This translates into having to spend less effort recruiting participants as well as less effort recruiting potential collaborating agencies. Many project directors noted that the program is more effective for parents who are more mature, and who are ready to make a commitment to change.

In Estill, a project that targets 4- and 5-year-olds, kindergarten teachers have remarked that Even Start children are doing noticeably well in school, and that fewer Even Start children are being retained in grade or are failing the compulsory exam for first-graders than might be expected. Other projects also reported positive comments from kindergarten teachers about how well-prepared the children are and that parents have become involved in their children's education.

A number of project directors also commented specifically about changes in families--that fewer families had moved away (especially in areas with traditionally high mobility), that parents were taking responsibility for their own behaviors and for their children's

behaviors, and that children were presenting fewer problems in school settings. One collaborator commented that because the Even Start program is still changing, and because it has not yet become institutionalized like Head Start, it can respond to local needs much more effectively than can Head Start or other more established programs.

Relationships with Local School Districts

Every project director described the local school district as supportive of Even Start. Some staff described relationships with the local Chapter 1 office and staff as more well developed than with the classroom teaching staff because of the connections between Even Start and Chapter 1 within the central office, and also because not many children have yet entered first grade. In Reading, the project director reported that the project has a strong relationship with the state Chapter 1 office in addition to its good relationship with the local Chapter 1 office. In Phoenix, the preschool teachers and kindergarten teachers have an annual "Switch Day" so each group can appreciate what the other routinely faces.

One widespread comment was that Even Start has begun to influence what the schools are doing. The project director in Golden reported that Even Start has helped schools redefine what their mission is, and she takes that as a reflection of Even Start's success in working with hard-to-reach families. Administrators in Reading, Richmond, Indianapolis, Phoenix, and Albuquerque concurred that the Even Start model of working with the entire family has helped convince school districts of the importance of establishing relationships with families before their children begin kindergarten. In Waterville, classroom teachers have begun to make home visits; in Golden, the Chapter

projects were concerned about the longer-term funding for their projects and the local district's or the state's commitment to inter-generational literacy programs. What came across from the entire group was that staff and collaborators alike believe that the Even Start program has a future because the need for services remains.

Chapter Four

Characteristics of Even Start Participants: Who is Served by Even Start?

This section presents data from the NEIS that describe the families, children, and adults that participated in Even Start during the 1992-93 program year in terms of household composition, race and ethnicity, educational and employment status, primary language, and other variables. There were 340 Even Start projects operational in 1993-93. Some exhibits are based on 120 cohort 1 and 2 projects; others are based on 270 out of 340 projects across the four cohorts. The effects of these missing data are unknown. Subsections include:

- Number of Participants
- Characteristics of Participating Families
- Characteristics of Participating Adults
- Characteristics of Participating Children
- Comparison with Head Start and CCDP
- Characteristics of LEP Adults
- Need Level of Even Start Adults
- Project Variation in Population Served

Number of Participants

Even Start provides three types of educational services (adult education, parenting education and early childhood education) and several types of support services (e.g., transportation, meals and counseling). During 1992-93 core services were provided to 16,518 families, an average of 61 families per project. Projects provided early childhood education services to 22,429 children (83 per project), and adult education or parenting education services to 18,586 parents (69 per project) in these same families (Exhibit 4.1).

Characteristics of Participating Families

Family characteristics discussed here are based on data from families in which at least one family member participated in some Even Start core service during the 1992-93 program year.

Exhibit 4.3: Number of Adults in Even Start Families (1992-93 Program Year)

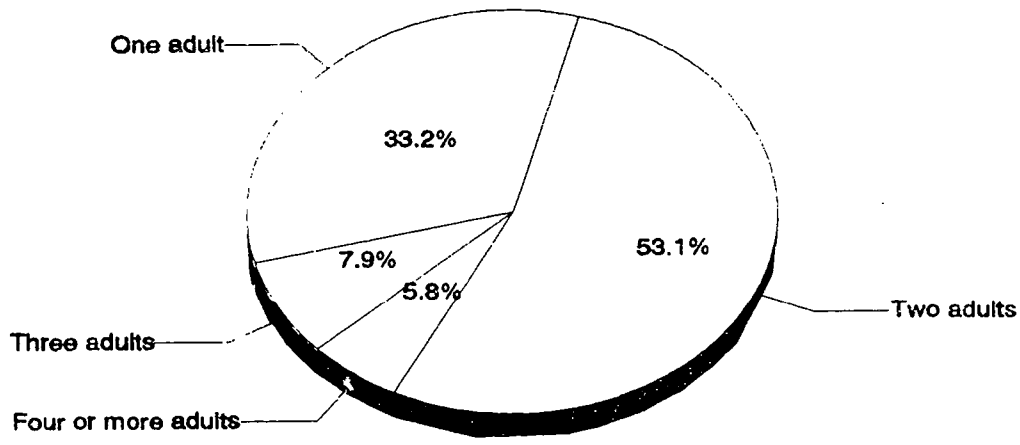


Exhibit reads: 33.2 percent of Even Start families had one adult in the household.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.4: Number of Children in Even Start Families (1992-93 Program Year)

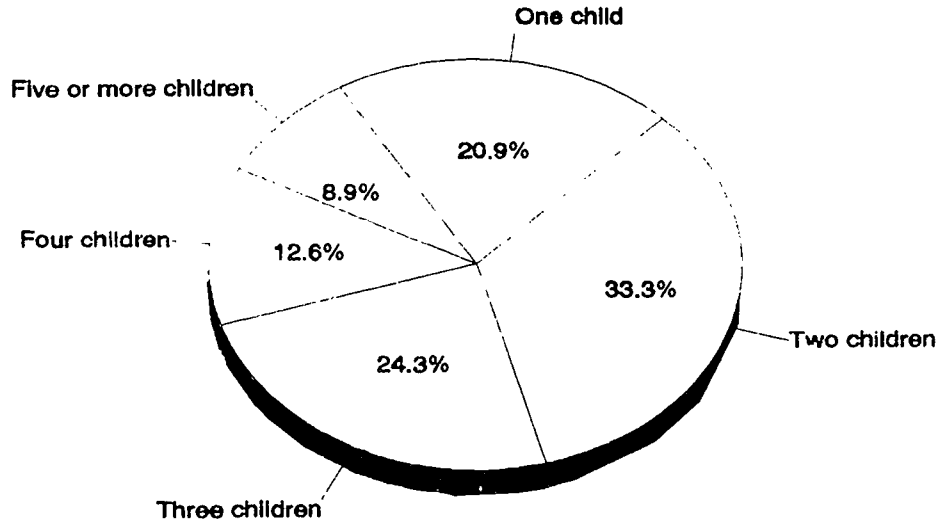


Exhibit reads: 20.9 percent of Even Start families had one child in the household.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.6

Primary Sources of Financial Support for Even Start Families (1992-93 Program Year)

Primary Sources of Financial Support	Percent of Families
Government assistance	49%
Job wages	46%
Alimony/child support	2%
Other	3%

Exhibit reads: 49 percent of Even Start families relied on government assistance as their primary source of financial support in 1992-93.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.7: Total Annual Income of Even Start Families (1992-93 Program Year)

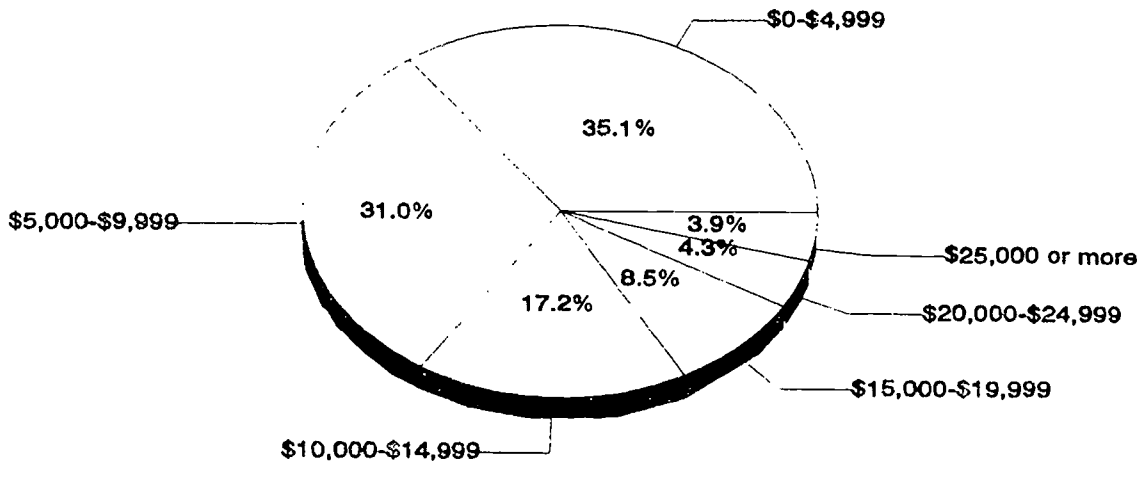


Exhibit reads: 35.1 percent of Even Start families had annual incomes of less than $5,000 in 1992-93.
Note: Based on reports from 270 of 340 projects.

Characteristics of Participating Adults

This section describes the more than 18,000 adults who participated in Even Start core services during 1992-93.

Age of Participating Adults in Even Start Families

Most adults in Even Start families were between 22 and 29 years old (46 percent), or between 30 and 39 years old (31 percent). Only 13 percent were in the 18 to 21 age range, 3 percent were younger than 18, 6 percent of Even Start adults were 40 to 49 years old, and 2 percent were 50 or older (Exhibit 4.8). This age distribution has not changed over time. Given the population targeted by Even Start, it might be expected that more than three percent of Even Start adults would be under 18 years of age. However, a family is eligible for Even Start only if an adult in the family qualifies for adult basic education, and adult basic education participants must either be at least 16 years old and not in school or beyond the age of compulsory schooling in their state.

Exhibit 4.8: Age of Participating Adults in Even Start Families (1992-93 Program Year)

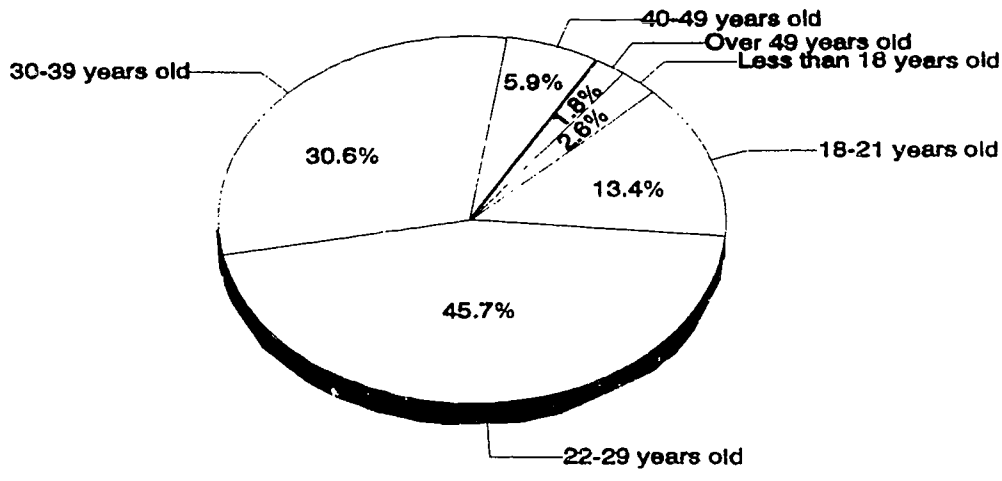


Exhibit reads: 13.4 percent of participating adults in Even Start families were 18-21 years old in 1992-93
Note: Based on reports from 270 of 340 projects.

Exhibit 4.10: Racial/Ethnic Background of Participating Adults in Even Start Families (1992-93 Program Year)

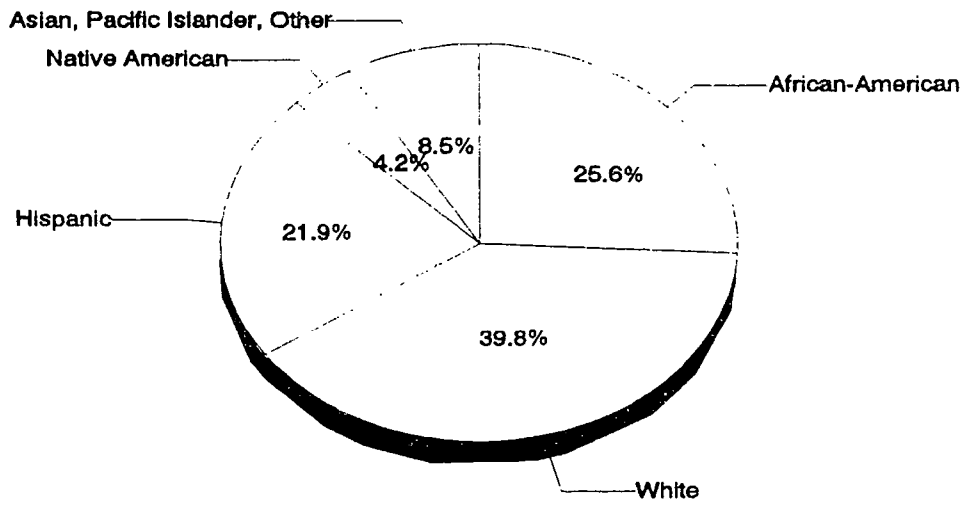


Exhibit reads: 25.6 percent of participating adults in Even Start families identified their racial/ethnic background as African-American.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.11: Ethnic Background of Hispanic Adults in Even Start Families (1992-93 Program Year)

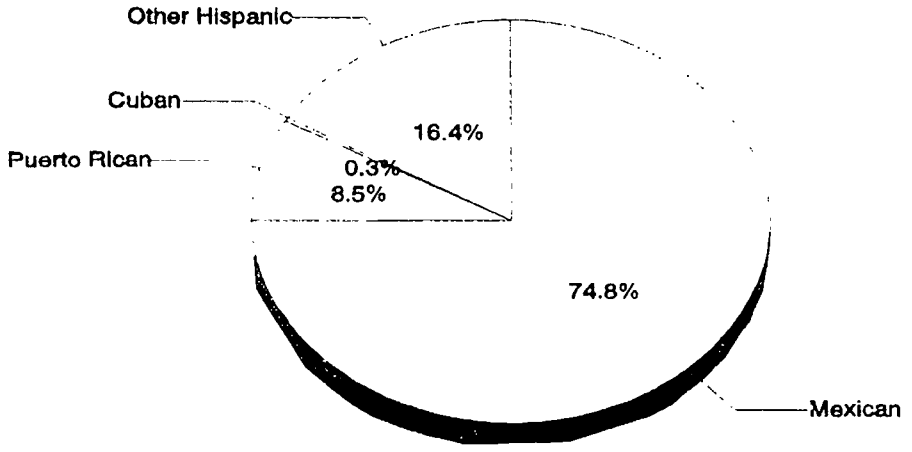


Exhibit reads: 74.8 percent of Hispanic adults in Even Start identified their background as Mexican.
Note: Based on reports from 270 of 340 projects.

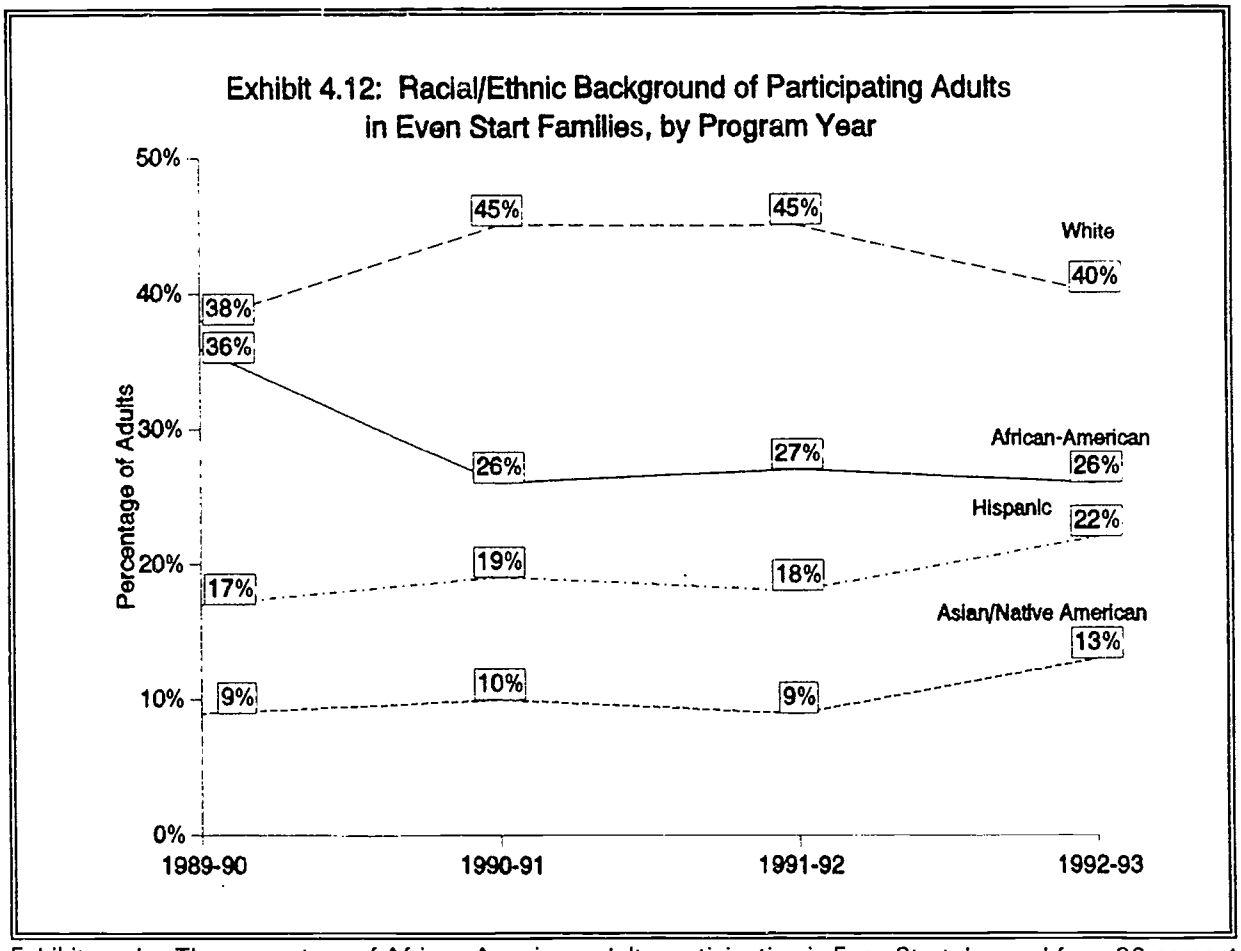


Exhibit reads: The percentage of African-American adults participating in Even Start dropped from 36 percent in 1990-91, and then remained constant.
Note: Based on reports from 120 projects in 1989-90, 1990-91, and 1991-92, and from 270 of 340 projects in 1992-93.

adults to 45 percent and decreasing the percentage of African-Americans to 26 percent. These numbers were unchanged in 1991-92. However, in 1992-93, the percentage of white adults returned almost to its initial level (40 percent), while the percentage of Hispanics and Asians/Native Americans/others rose to 22 percent and 13 percent. There were no federal policies that would lead to such changes, and we assume that the observed changes are due simply to differences between the racial composition of newer projects and older projects.

Educational Attainment of Adults in Even Start Families

A distribution of years of education prior to participating in Even Start is shown in Exhibit 4.13. The solid line represents adults participating in any type of Even Start core service.

Exhibit 4.13: Years of Schooling for Adults in Even Start Families: Core Service Participants and Non-Participants (1992-93 Program Year)

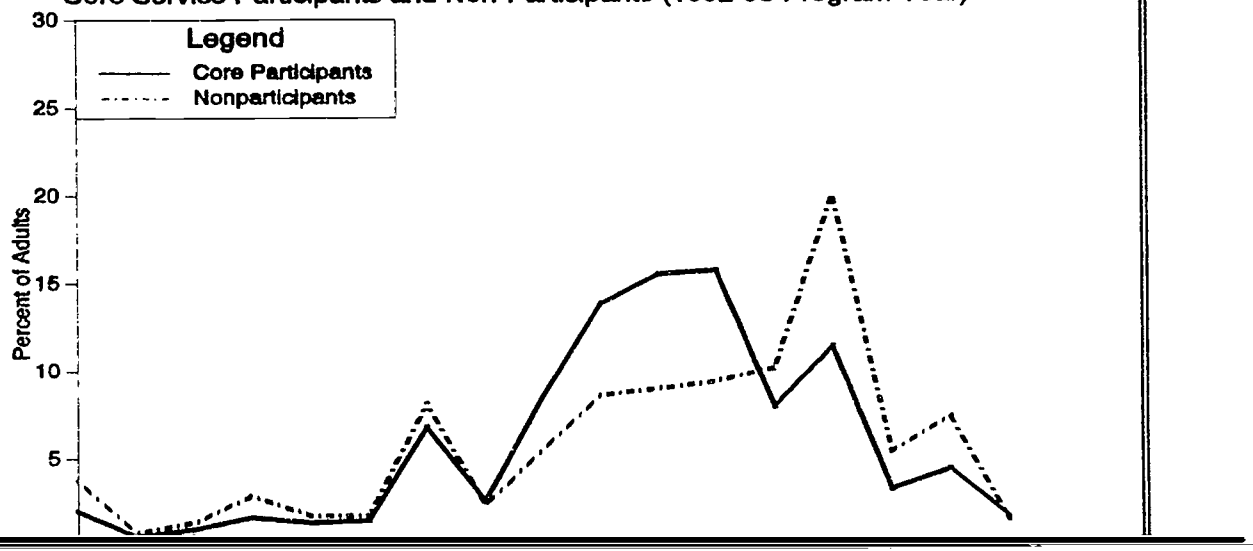


Exhibit 4.14: Distribution of CASAS Functional Literacy Level for Entering Adults (1992-93 NEIS Data Set)

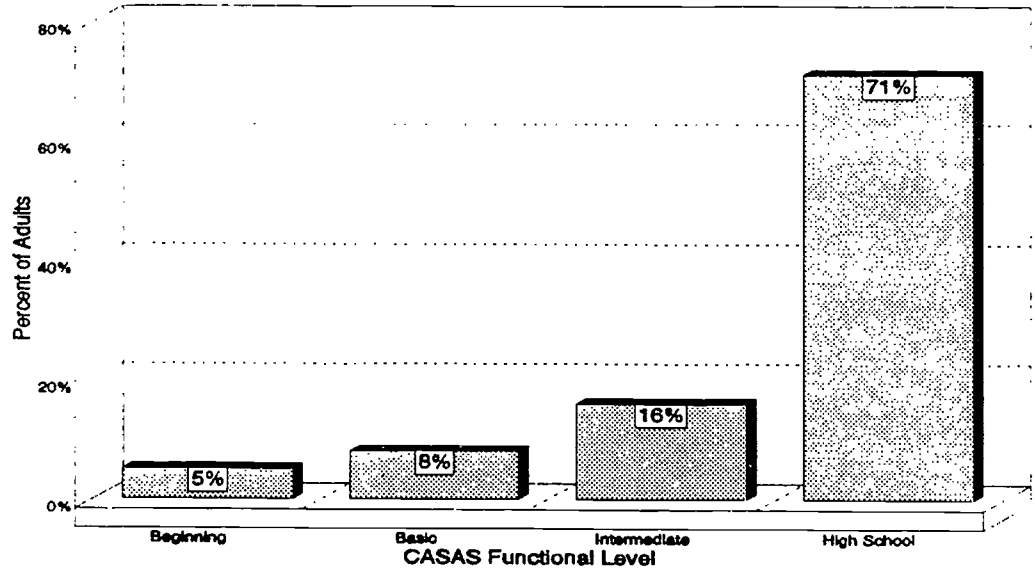


Exhibit reads: 71 percent of Even Start adults had CASAS pretest scores that placed them in the "high school" functional level.
Note: Based on data from 120 of 340 projects.

primary language (214). Adults in families with higher incomes also tended to enter with higher literacy levels than adults in families with lower incomes.

Exhibit 4.16 compares CASAS reading achievement pretest scores of Even Start adults with the pretest scores of adults in other related programs. In one evaluation of the "321" Program (an adult basic education program in California), researchers (CASAS, 1992) reported pretest means of 217 scale score points for 5,029 ABE students and 210 points for 31,006 ESL students, lower entry levels than their Even Start counterparts. The California programs served a more ethnically diverse population than Even Start, often with more limited English proficiency, and many participants enrolled to meet a state or federal mandate. One explanation for the lower scores among California's 321 participants is that they required tests for adults whose first language was not English, whereas the Even Start evaluation did not include such a requirement, eliminating these potentially low scorers from the study.

The California-funded GAIN (Greater Avenues for Independence) program for Aid to Families with Dependent Children applicants and recipients conducted literacy testing on all participants. An early study on this program reported an average pretest of 233 (CASAS, 1990). The higher literacy level of GAIN adults was not surprising since more than half of the participants of this welfare reform program had high school diplomas, or other degrees before entering the program.

Exhibit 4.15

Pretest Scores on the CASAS Reading Survey (Scale Score Points; NEIS Data Set)

Group	Number of Adults	Pretest Mean	Pretest Standard Deviation
Highest grade at intake			
Grades 0-4	54	194.6	15.2
Grades 5-8	723	225.0	16.5
Grades 9-12	3,030	230.7	12.9
Diploma/GED	667	232.7	13.2
Age at intake			
16-20	752	231.2	11.7
21-25	1,561	231.2	13.0
26-30	1,280	229.2	15.3
31-35	596	227.9	14.8
35-40	279	226.3	17.9
Over 40	174	223.3	17.2
Primary language is English			
Yes	3,948	231.9	12.1
No	596	214.2	18.3
Family annual income			
Under $5,000	2,076	228.7	13.6
$ 5,000 - 10,000	1,209	229.1	14.8
$10,000 - 15,000	557	230.0	15.6
$15,000 - 20,000	324	231.6	15.0
$20,000 - 25,000	171	233.6	14.1
Over $25,000	144	237.1	14.7
TOTAL	**4,694**	**229.6**	**14.4**

Exhibit reads: Adults entering Even Start without a high school diploma or GED performed at their expected functional level on the CASAS pretest.
Note: Based on reports from 120 of 340 projects.

Exhibit 4.16: Average Pretest Scale Score on the CASAS Reading Survey for Even Start and Other Related Programs

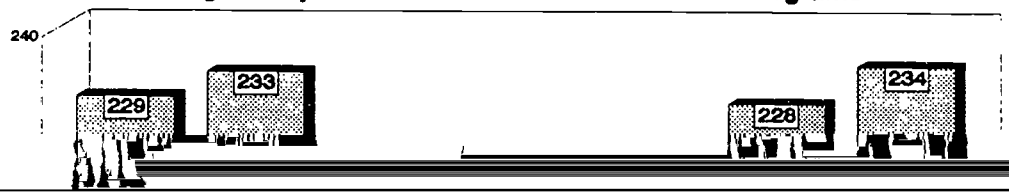


Exhibit 4.18: Primary Language of Adults in Even Start Families (1992-93 Program Year)

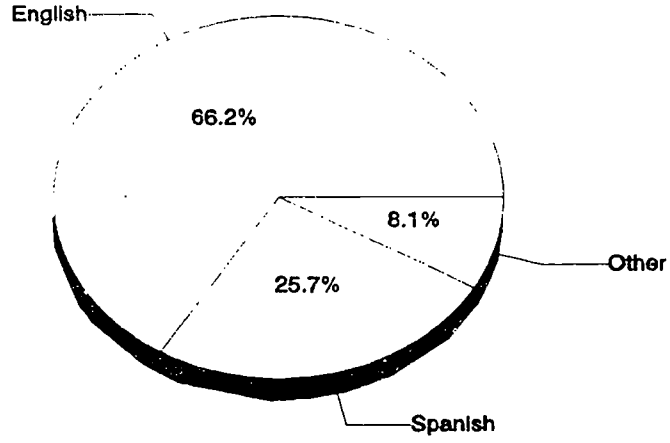


Exhibit reads: 66.2 percent of Even Start adults reported English as their primary language.
Note: Based on data from 270 of 340 projects.

Exhibit 4.19: Primary Language of Participating Adults in Even Start Families, by Program Year

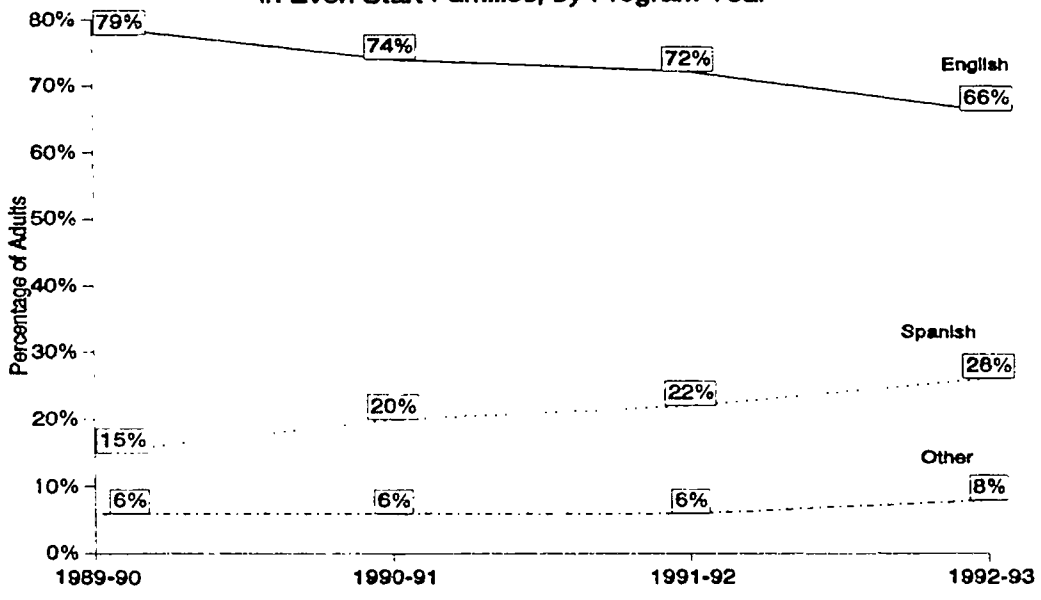


Exhibit reads: Spanish was the primary language of 15 percent adults in 1989-90. This percentage rose each year, to 26 percent by 1992-93.
Note: Based on reports from 120 projects in 1989-90, 1990-91, and 1991-92, and from 270 of 340 projects in 1992-93.

Exhibit 4.21 presents information about the language used by adults when reading to their children. Seventy-one percent of Even Start adults for whom English was not the primary language reported that they read to their children in their primary language, 17 percent of this group read to their children in English, and 9 percent read in both English and their primary language.

Employment Status of Participating Adults in Even Start Families

Most Even Start adults were not employed at the start of the program year. Seventy-six percent of the adults who participated in Even Start core services were not employed, 16 percent were employed full-time, and 8 percent were employed part-time (Exhibit 4.22). Exhibit 4.23 expands on this information by showing the duration of employment. Eighty percent of the adults who were not employed had been so for more than 12 months. Over half (51 percent) of the adults who were employed had been so for more than 12 months.

Characteristics of Participating Children

This section of the report presents data on more than 20,000 children in families that participated in core Even Start services during the 1992-93 program year.

Age of Participating Children

Even Start projects focus somewhat on children in the middle of the eligible age range (birth through age 7): 51 percent are 3, 4, or 5 years of age; 37 percent are less than 3, and 12 percent are 6 or 7 years old (Exhibit 4.24). As existing projects matured and recruited new families, and as new projects were funded, the average age of participating children dropped--from 4.3 years in 1989-90 to 3.7 years in 1992-93. Over this same period, the percentage of infants and toddlers in Even Start (less than 3 years old) increased from 27 percent to 37 percent, the percentage of preschoolers (ages 3 or 4) increased from 33 percent to 38 percent, and the percentage of school-age children (ages 5, 6, or 7) decreased from 40 percent to 25 percent (see Exhibit 4.25). These trends could have occurred for several reasons. First, in 1991 the Even Start legislation was changed to allow children to participate starting at birth instead of at age 1, as in the original law. Second, the Department of Education actively encouraged projects to extend services to young children, so that projects were serving the entire 0-8 age range. And finally, as projects developed and matured they became more comfortable extending services to young children, especially the siblings of children already in the program.

Exhibit 4.20

Reported English Language Facility of Adults Participating in Even Start Core Services, For Adults Whose First Language is Not English (1992-93 Program Year)

Reported English Language Facility	Percent of Adults
Speaks English	
Very well	24%
Somewhat	51%
Not at all	25%
Reads English	
Very well	15%
Somewhat	48%
Not at all	37%
Understands English	
Very well	23%
Somewhat	55%
Not at all	22%

Exhibit reads: Of adults whose first language is not English, 24 percent report speaking English very well.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.21

Language Used to Read to Child for Adults Whose First Language is Not English (1992-93 Program Year)

Language Used to Read to Child	Percent of Adults
Primary language	71%
English	17%
Both	9%
Other	3%
Total adults	100%

Exhibit reads: Of adults whose first language is not English, 71 percent read to their child in their primary language.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.22: Employment Status of Adults in Even Start Families (1992-93 Program Year)

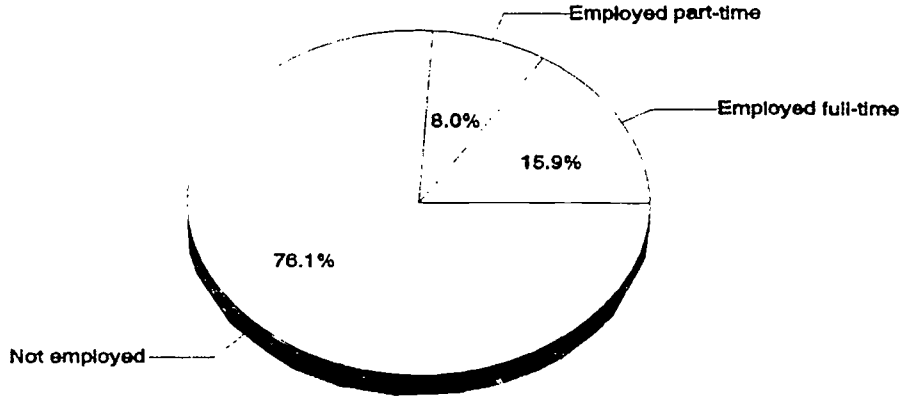


Exhibit reads: 76.1 percent of Even Start adults were not employed in 1992-93.
Note: Based on reports from 270 of 340 projects.

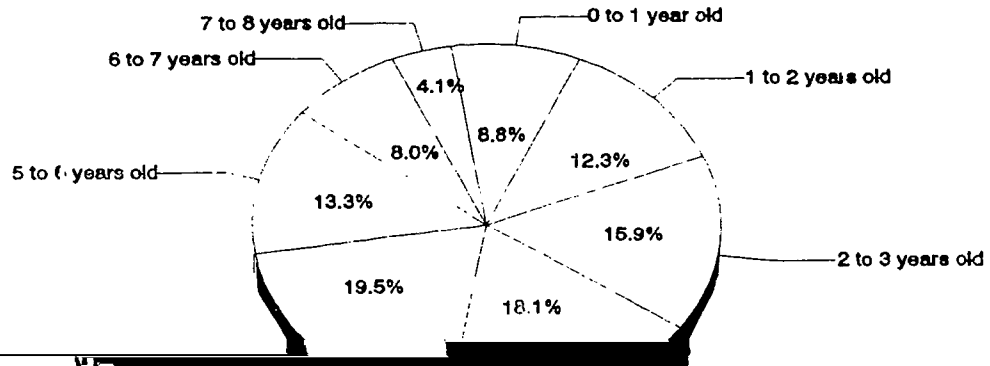
Exhibit 4.23

Duration of Employment Status of Adults in Even Start Families (1992-93 Program Year)

Employment Status/Duration	Percent of Adults
Employed	
Less than 6 months	31%
6 to 12 months	18%
More than 12 months	51%
Not employed	
Less than 6 months	11%
6 to 12 months	9%
More than 12 months	80%

Exhibit reads: Of the Even Start adults who were not employed, 80 percent had been so for more than 12 months.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.24: Age of Participating Children in Even Start Families (1992-93 Program Year)



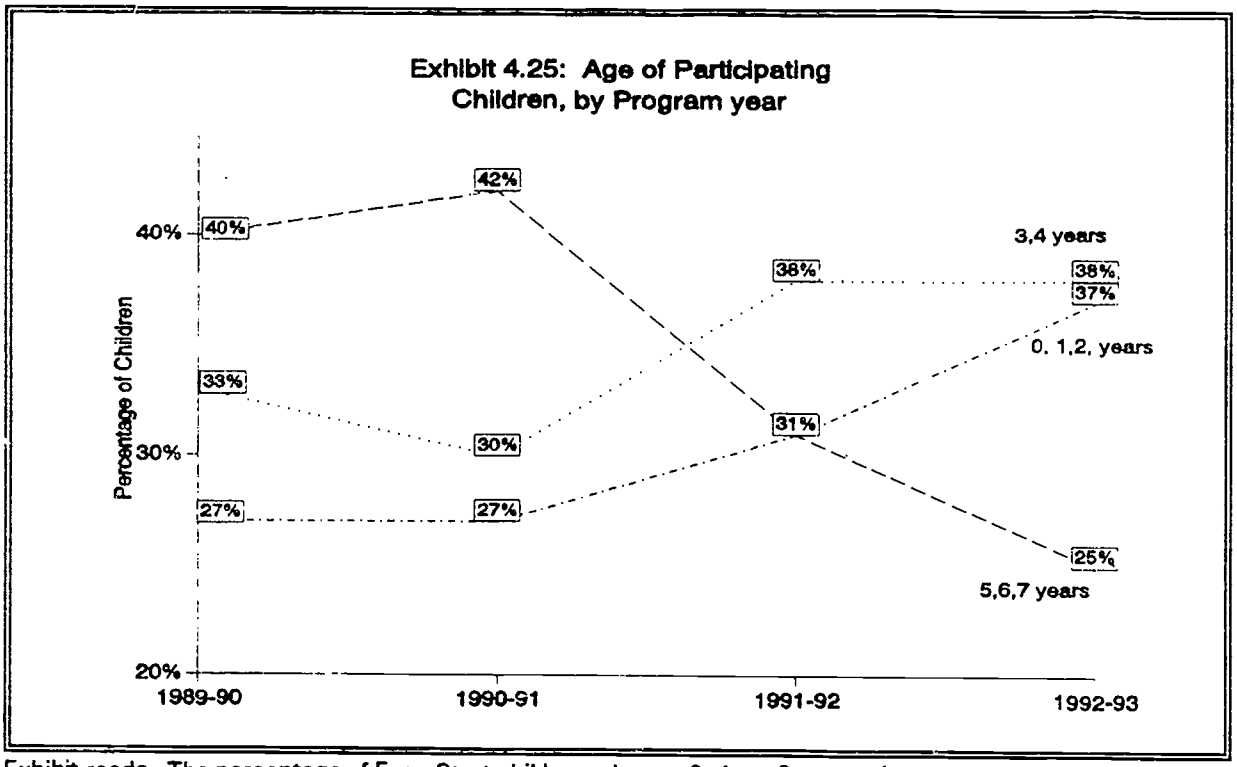


Exhibit reads: The percentage of Even Start children who are 0, 1, or 2 years of age increased from 27 percent in 1989-90 to 37 percent in 1992-93.
Note: Based on reports from 120 projects in 1989-90, 1990-91, and 1991-92, and 270 of 340 projects in 1992-93.

Gender of Participating Children

The percentage of male and female participating children is shown in Exhibit 4.26: 50 percent of the children were male and 50 percent were female.

Race/Ethnicity of Children in Even Start Families

Racial and ethnic categories for children are presented in Exhibit 4.27 and, as expected, are similar to those presented for adults: 39 percent of children were identified as white, 28 percent of children were African-American, 3 percent were Native American, and 8 percent were Asian/Pacific Islander or other categories. For 22 percent of children, Hispanic was listed as their ethnic heritage. Of this group, 74 percent were Mexican, 11 percent were Puerto Rican, and 15 percent were "other Hispanic" (see Exhibit 4.28).

Educational Experiences of Participating Children

Fifty-five percent of Even Start children were reported to have had no formal educational experience prior to the beginning of Even Start, 22 percent had a preschool experience (either Head Start or some other preschool), 11 percent had participated in kindergarten, and 8 percent participated in a primary grade (Exhibit 4.29).

Exhibit 4.28: Ethnic Background of Hispanic Children in Even Start Families (1992-93 Program Year)

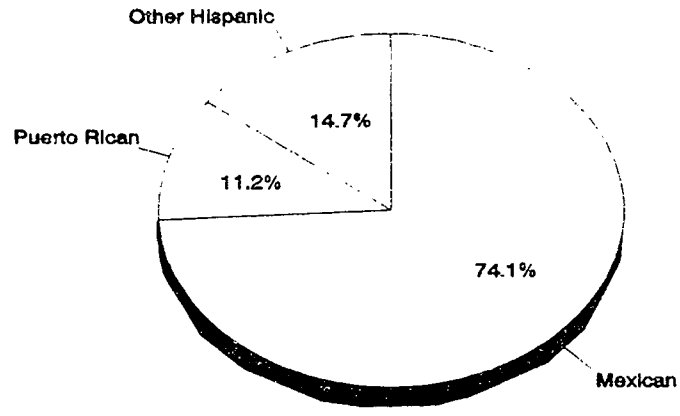


Exhibit reads: 74.1 percent of Hispanic children in Even Start were identified as being of Mexican background.
Note: Based on reports from 270 of 340 projects.

Exhibit 4.29: Previous Educational Experience of Children Participating in Even Start Core Services (1992-93 Program Year)

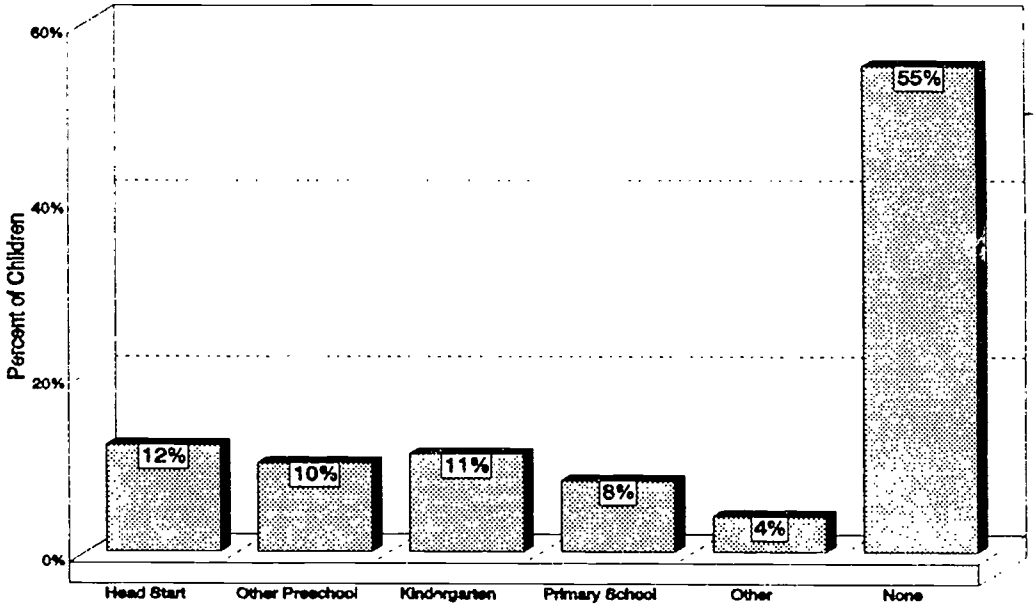


Exhibit reads: 12 percent of Even Start children were in Head Start prior to joining Even Start.
Note: Based on reports from 270 of 340 projects.

Disabilities of Participating Children

Of all children participating in Even Start core services, 7 percent were reported to have a disability. Exhibit 4.30 shows the specific types of disabilities, none of which exist for more than about two percent of the Even Start population. Learning problems were cited for 31 percent of the children with disabilities (2 percent of all Even Start children), emotional problems for 12 percent, hearing problems for 9 percent, and "other" physical disabilities for 9 percent.

Vocabulary Skills of Even Start Children

This evaluation used the Peabody Picture Vocabulary Test (PPVT) to assess children's receptive (hearing) vocabulary. PPVT scores are standardized, so that a score of 100 represents the average score for the norms group at each age level. Across children of all ages, pretest scores averaged 79.8 standard score points (Exhibit 4.31). This corresponds to the 9th percentile when compared to national norms and points out the low verbal skills of children prior to entry into Even Start.

Comparison With Head Start and CCDP

Even Start is a comparatively new federal program and it is of interest to see how the characteristics of Even Start participants compare to the characteristics of participants in other similar federal programs. Such cross-program comparisons are never easy because measures are often not comparable across studies. Nevertheless, Exhibit 4.32 presents selected data on Even Start families, on families that participated in Head Start, and on families who are participating in the Comprehensive Child Development Program (a family support program funded by the U.S. Department of Health and Human Services).

Even Start families are less often headed by a single parent than families who participate either in Head Start or in CCDP (37 percent single parent families in Even Start vs. 55 percent in Head Start and 63 percent in CCDP). Even Start and Head Start appear to

Exhibit 4.30

Types of Disabilities for Children Participating in Even Start Core Services (1992-93 Program Year)

Type of Disability	% of Children with Disability (N = 1,589)	% of Children in Even Start (N = 22,429)
Specific learning problem	31%	2.3%
Emotional problem	12%	0.9%
Hearing problem	9%	0.6%
Other physical disability	9%	0.6%
Visual problem	6%	0.5%
Mental retardation	5%	0.4%
Speech problem	1%	0.0%
Orthopedic problem	3%	0.2%
Other	24%	1.8%

Exhibit reads: Six percent of Even Start children who had a disability have a visual problem. This represents 0.5 percent of all Even Start children.
Note: Based on reports from 270 of 340 projects.

Characteristics of Limited English Proficient Adults

Some Even Start projects focus almost exclusively on adults who have limited English proficiency (LEP), while other projects serve mixed populations. For this evaluation, families with limited English proficiency were defined as families for whom the target

Exhibit 4.31

PPVT Pretest Scores (Standard Scores from the NEIS Data Set)

Group	N	Mean	SD
Age at pretest			
3-0 to 3-11	778	81.3	15.4
4-0 to 4-11	1,134	76.3	17.5
5-0 to 5-11	443	81.4	16.6
6-0 to 6-11	225	86.4	17.4
7-0 to 7-11	89	85.0	15.7
Gender			
Male	1,305	79.4	17.1
Female	1,292	80.4	16.8
Ethnic background			
Asian	48	75.9	17.7
African-American	1,018	74.4	16.3
Hispanic	378	74.2	17.4
Native American	108	84.3	13.9
White	1,094	86.5	15.2
Prior preschool experience			
No	1,781	78.9	16.8
Yes	898	81.5	17.2
Highest grade attained by target parent			
Grade 0-4	20	68.8	16.1
Grade 5-8	378	77.9	17.2
Grade 9-12	1,668	79.8	16.9
Diploma or GED	521	82.0	16.6
Total	**2,677**	**79.8**	**17.0**

Exhibit reads: The average PPVT pretest score for males was 79.4 standard score points.
Note: Based on reports from 120 of 340 projects.

Exhibit 4.33

Intake Characteristics of Adults Who Enter Even Start with Limited English Proficiency

Intake Characteristics	Percent of Adults
Educated outside of the U.S.	86%
Did not reach 9th grade	60%
Single parent	18%
Unemployed	78%
Annual income < $15,000	83%
Primary source of income is government assistance	48%

Cohort 1 and 2 projects, aggregated to the project level, produced findings in three fairly non-overlapping areas: category of need, age of children, and ethnic background.

Category of need. Most projects target families in which the primary caregiver does not have a high school diploma or a GED and is on welfare or has an income below the poverty level. Two special categories of projects can be identified:

- Predominately LEP: 18 out of 120 projects served a high percentage of

Steps Used in Formal Screening

Projects were asked to identify the formal steps they used to screen participants by responding to a checklist and by writing in additional steps or activities. A summary of responses is presented in Exhibit 5.2. Nearly all of the projects verified the eligibility of potential participants (93 percent) and gave a basic orientation (88 percent) during the screening process. About three-quarters of the projects assessed the basic skills of adults (76 percent) while 60 percent contacted other agencies as part of the formal screening. Half of the projects (49 percent) tested children as part of screening, and 31 percent provided some counseling during screening.

Core Services Delivered: Types and Providers

Core services may be provided by staff funded by Even Start or by staff from cooperating agencies (e.g., a local Head Start program). Consequently, Even Start project directors were asked to report the types of core services provided to Even Start participants by staff funded through Even Start, by staff supported by cooperating agencies, or by both Even Start staff and cooperating agency staff.

Parenting Education Services

Even Start projects delivered a wide range of services to help parents raise their children. More than 90 percent of the Even Start projects offered the following types of parenting education services (Exhibit 5.3): helped families make use of services provided by other social service agencies, discussed parents' role in the education of their children, oriented parents and children to school routines, taught parents about child development, trained parents in child behavior management, worked on building parents' self-esteem, and instructed parents in life skills and in principles of health and nutrition.

Depending on the specific type of parenting education service, 24 to 44 percent of the projects provided services exclusively through Even Start staff; 39 to 57 percent of the projects delivered services jointly by Even Start staff and by staff from cooperating

Exhibit 5.1

Successful Strategies for Recruiting Eligible Participants: (1992-93 Program Year)

Recruitment Strategy	Percent of Projects
Public school referrals	62%
Agency referrals (e.g., WIC, health clinic)	58%
Telephone contact	50%
Home visits to potential participants	47%
Word of mouth	42%
Referrals from Head Start staff	34%
Targeted mailings	27%
Mass media	23%
Joint efforts with collaborative agency	9%
Posters / flyers	6%
Presentations / visits to community agencies	6%
General result of greater community visibility	5%
Even Start recruiting program (open house, fun fair, etc.)	2%

Exhibit reads: 47 percent of the reporting projects identified home visits as a successful recruitment strategy.
Note: Based on reports from 291 of 340 projects.

Exhibit 5.2

Steps Included in Formal Screening of Potential Participants (1992-93 Program Year)

Screening Activity	Percent of Projects
Verify eligibility	93%
Orientation	88%
Assess basic skills of adults	76%
Contact other agencies	60%
Test children	49%
Counseling	31%
None	1%

Exhibit reads: 93 percent of reporting projects verified eligibility as a step in formal screening of potential participants.
Note: Based on reports from 291 of 340 projects.

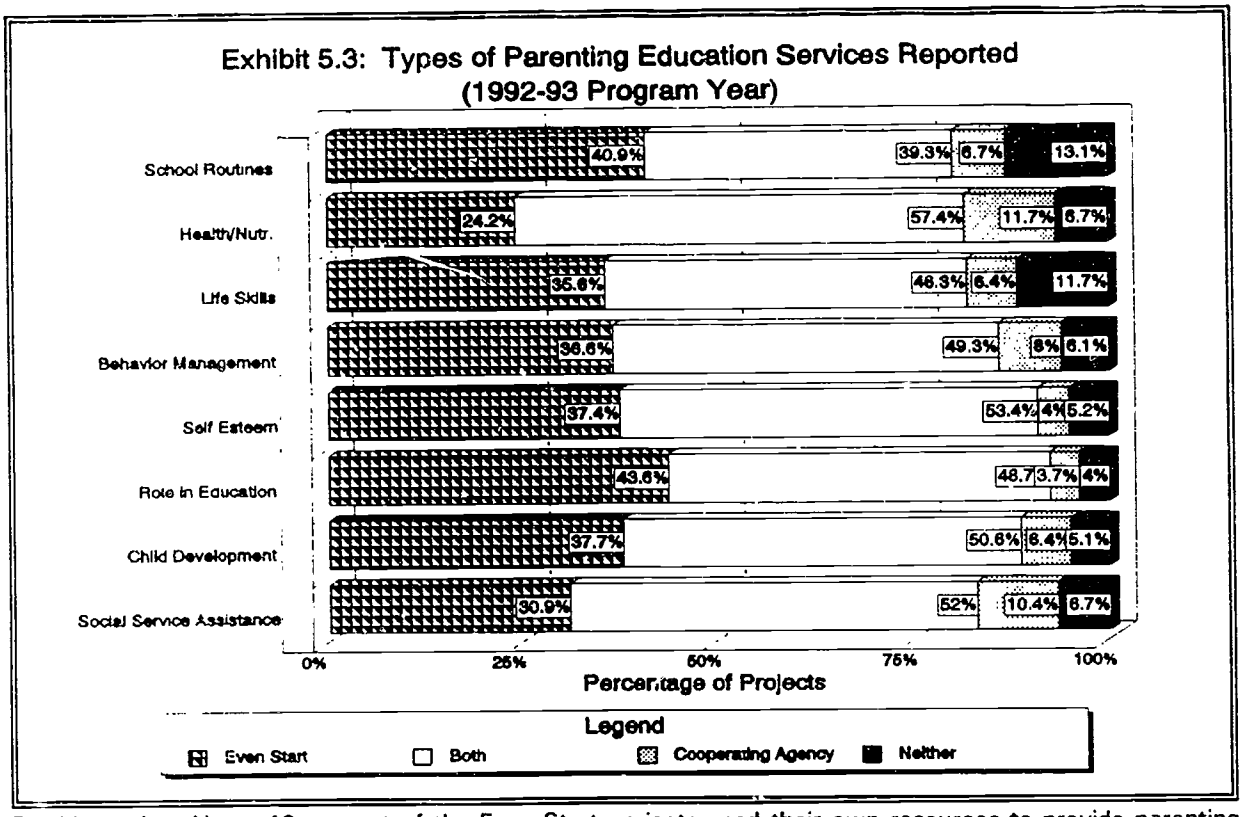
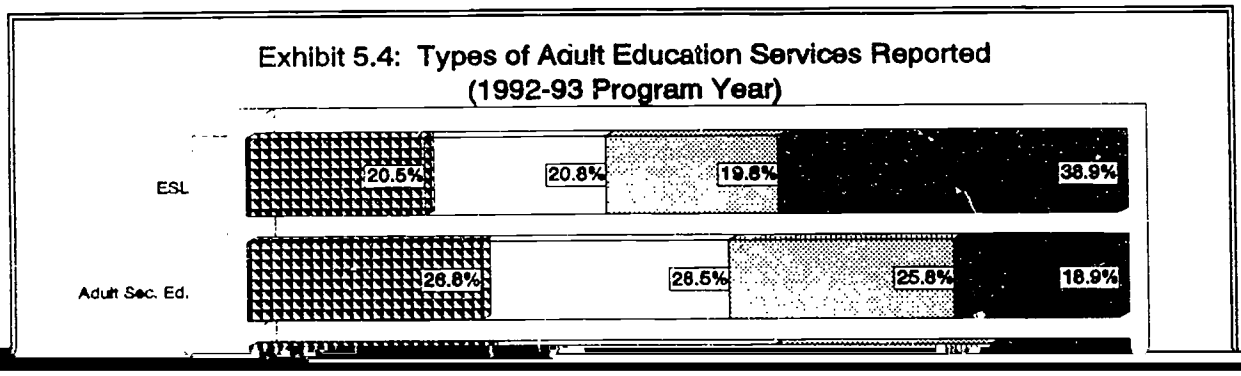


Exhibit reads: About 40 percent of the Even Start projects used their own resources to provide parenting education in life skills.

Note: Based on reports from 298 of 340 projects.



As would be expected, almost all Head Start and Chapter 1 pre-K services were provided by cooperating agencies, as were most kindergarten and primary school services. About 30 percent of the projects provided "other preschool" services directly by Even Start staff. This reliance on existing providers is not surprising given the high cost of early childhood education services and their widespread availability through cooperating agencies and the public schools.

Thus, Even Start projects are most likely to participate in the direct provision of services for parenting education and are more likely to delegate provision of services for adult education and for early childhood education. This fits with Even Start's mandate to build on existing services. In most communities, programs for early childhood education and of adult basic education already exist, and Even Start projects are taking advantage of

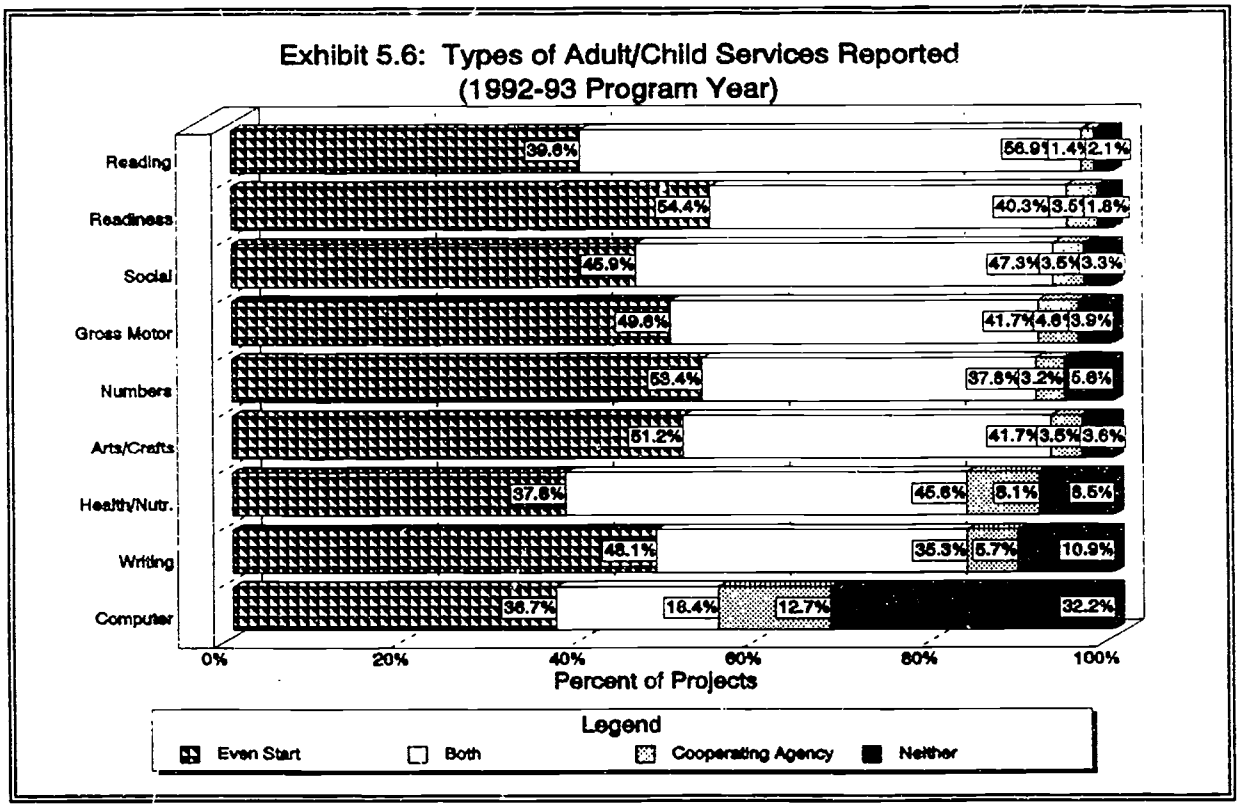


Exhibit reads: Few adult/child services were provided by a cooperating agency.
Note: Based on reports from 283 of 340 projects.

patterns, such as special month-long courses during the summer. Exhibit 5.7 shows that 64 percent of all projects provided parenting education year-round while 23 percent offered it only for the regular school year; 59 percent of all projects provided adult education year-round, while 29 percent offered it for the regular school year; and 55 percent of all projects provided early childhood education year-round, while 27 percent offered it for the regular school year.

Support Services: Types and Providers

As defined for this study, support services are activities provided directly to Even Start families to enable them to participate in core services. Support services remove barriers that, if unattended, restrict a family's ability to receive instructional and educational services. Such activities as staff development and training, while enabling the project to provide effective services to its clients, are not considered support services because families are not the direct recipients.

To avoid duplication, Even Start projects are expected to obtain support services from existing sources as much as possible. As is seen in Exhibit 5.8, more than 80 percent of

Exhibit 5.7

Term of Year Core Services Are Offered (1992-93 Program Year)

Core Service / Term of Year	Percent of Projects
Parenting education	
Year-round	64%
Regular school year	23%
Other	11%
Adult education	
Year-round	59%
Regular school year	29%
Other	13%
Early childhood education	
Year-round	55%
Regular school year	29%
Other	16%

Exhibit reads: Sixty-four percent of all reporting projects provide year-round parenting education.
Note: Based on reports from 273 of 340 projects.

other support services were provided by at least half of the projects including health care assistance; referrals for employment, mental health services, child protective services and domestic violence; treatment for chemical dependency; and referrals for services needed by persons with disabilities.

Across all types of support services, an average of 20 percent of Even Start projects provided the service directly, cooperating agencies provided support services in 17 percent of the projects, and Even Start and cooperating agencies jointly provided another 32 percent of projects. However, as might be expected, there is substantial variation in the extent to which different support services are provided by Even Start or by cooperating agencies. The percentage of Even Start projects providing support services with their own funds ranged from less than 10 percent for health care to 40 percent for child care. These findings suggest that Even Start projects did, as planned, obtain many support services from existing providers and stepped in to provide services not available locally.

Exhibit 5.8

Percentage of Projects Providing Support Services and Other Special Activities Through Even Start and/or Cooperating Agencies (1992-93 Program Year)

Support Services	Even Start	Both	Cooperating Agency	Neither
Transportation	34%	47%	9%	10%
Family advocacy	30%	50%	5%	15%
Counseling	19%	43%	22%	16%
Nutrition	14%	47%	22%	18%
Child care	40%	34%	8%	18%
Meals	23%	33%	25%	19%
Health care	7%	30%	40%	23%
Employment	19%	42%	12%	27%
Mental health	24%	36%	12%	28%
Child protective services	10%	21%	32%	37%
Domestic violence	17%	31%	12%	40%
Personal assistance	11%	21%	23%	45%
Chemical dependency	18%	23%	13%	46%
Translators	20%	15%	9%	56%
Parent stipend	10%	5%	15%	70%

Exhibit reads: Most projects provided transportation services: 34 percent of the projects provided transportation exclusively through Even Start resources, 47 percent through Even Start and cooperating agency resources, and 9 percent exclusively through cooperating agency resources.
Note: Based on reports from 297 of 340 projects.

Special Activities

In addition to providing core and support services, Even Start projects offer other occasional or one-time activities for the families they serve. These special activities are used to recruit families, provide information or training, celebrate participant accomplishments, and promote family pride, unity and sense of belonging. Exhibit 5.9 lists several types of special activities. The categories are based on a content analysis of the written responses of projects in all cohorts. Because projects' responses were

Exhibit 5.10

Number and Percentage of Arrangements to Provide Core Services by Type of Organization (1992-93 Program Year)

Type of Organization	Parenting Education		Adult Education		Early Childhood Education		Total
	N	%	N	%	N	%	N
Other departments/programs within public schools	627	25%	401	24%	622	33%	1650
Postsecondary colleges	202	8%	250	15%	115	6%	567

for parenting education, 27 percent for adult education, and 31 percent for early childhood education.[3]

A wide variety of organizations cooperated with Even Start projects. The most common was "other departments and programs within the public schools" which accounted for 25 percent of the parenting education arrangements, 24 percent of the adult basic education arrangements, and 33 percent of the early childhood education arrangements. The next most common type of cooperating agency was "local, county, state, or tribal agencies or organizations" which accounted for 23 percent of parenting education arrangements, 21 percent of adult basic education arrangements, and 15 percent of early childhood education arrangements. Other cooperating agencies included postsecondary institutions, Head Start, day care or other preschool programs, foundations, volunteer groups, and other community-based organizations. Although they were mentioned infrequently, religious institutions (church, temple, or mosque) were involved in more than 80 cooperative arrangements.

Exhibit 5.11 displays the percentage of cooperative arrangements by core service area and source of authority over activities. The locus of authority for activities is split between Even Start (about one-quarter of the agreements), the cooperating agency (about half of the agreements), and joint decision-making (about one-quarter of the agreements)

Exhibit 5.11

Percentage of Cooperative Arrangements to Provide Core Services by Core Service Area and Source of Authority Over Activities (1992-93 Program Year)

Source of Authority Over Even Start Activities	Parenting Education	Adult Education	Early Childhood Education
Even Start	25%	26%	22%
Cooperating Agency	46%	48%	53%
Co-Deciding	29%	26%	25%

Exhibit reads: Twenty-five percent of all cooperative arrangements to provide parenting education were governed by Even Start.
Note: Based on reports from 297 of 340 projects.

Exhibit 5.12

Cooperative Arrangements for Support Services

Support services enable families to participate in Even Start core services by removing barriers to their participation. The support services most commonly provided through collaborative arrangements were transportation, meals, health care, counseling, and child care. Exhibit 5.13 shows that projects engaged in 2,027 cooperative arrangements for support services, and displays the number and percentage of projects providing a particular support service through a cooperative arrangement.

Exhibit 5.13

Cooperative Arrangements for Support Services (1992-93 Program Year)

Support Service	Number of Cooperative Arrangements	Percent of Projects
Counseling	218	58%
Transportation	208	49%
Health care	219	46%
Nutrition	163	38%
Meals	166	37%
Childcare	188	36%
Advocacy	178	36%
Employment referrals	125	29%
Child protective services	105	25%
Mental health	109	23%
Referrals for battered women	93	21%
Handicapped care	81	18%
Chemical dependency referrals	78	15%
Translators	65	14%
Parent stipend	41	10%
Total	**2,027**	**100%**

Exhibit reads: Forty-nine percent of all reporting projects used cooperative arrangements to provide transportation.
Note: Based on reports from 297 of 340 projects.

Implementation Problems and Solutions

Two types of implementation issues are addressed in this section. First, projects were asked an open-ended question about major barriers to the implementation of Even Start as well as the strategies or solutions used to deal with the barriers. Second, projects were asked to identify features of the Even Start law or regulations which they felt needed revision to permit more effective implementation.

Barriers to Program Implementation

Many different types of barriers were identified by the 120 Cohort 1 and 2 Even Start projects for the 1992-93 program year (Exhibit 5.14). The most common barriers were difficulties in the recruitment, retention, attendance, and motivation of families (33 projects across both cohorts), problems of communication and coordination with cooperating agencies (28 projects), a lack of transportation for families (25 projects), the difficult social service needs of the family and community (14 projects), a lack of quality child care (14 projects), financial problems (14 projects), staffing problems (13 projects), problems with facilities and space (12 projects), and problems with the evaluation (12 projects).

Features of the Law or Regulations that Would Enhance Implementation

Exhibit 5.15 summarizes the responses given when the 120 projects in Cohorts 1 and 2 were asked about features of the Even Start law or regulations that could be revised in order to enhance program implementation. A companion exhibit (Exhibit 5.16) lists specific comments from projects. The responses are paraphrased to give the reader a quick sense of what, in some cases, were fairly detailed points that projects wished to make.

During 1992-93, 20 of the Cohort 1 and 2 projects responding to this item indicated a need to make eligibility criteria more flexible. This is a great reduction from 1990-91 levels for this item. Twenty-four projects worried about the four-year funding cycle -- a clear indication of the fact that Cohort 1 projects were in the last year of their grant. Eight projects felt that the law should allow more flexible program design; 9 projects

Exhibit 5.14

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
Problems of Recruitment, Retention, Motivation, and Attendance Number of references: 33	Awards, family-oriented trips, made parents aware of being committed. Project kept a waiting list to fill vacancies quickly. Used individual, informal counseling sessions; gave referrals to counseling. Celebrated small successes along the way; broke goals into smaller parts. Involved the community involved in dealing with barriers by sending out newsletters. Better screening re: program components, e.g., understand this is more than adult education. Personal, face-to-face recruitment. "Bonus bucks," development of trusting relationship, more home visits. Use of various means of recruitment: word of mouth, home visit, and school activities. Attempted to provide alternative places for visits, e.g., library, public park, etc. Attempt to encourage involvement of entire family. Adherence to attendance policy; reentry of problem families is probationary. Even Start staff take adults to classroom and work with them. Incentives given (e.g., coupons for restaurants) to encourage attendance. Provided broader program to include more goals (e.g., drivers' education). Instituted attendance policy; participants were dropped for missing three sessions per month. Started volunteer-in-schools program to build familiarity.

Exhibit 5.14
(continued)

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
Transportation for Families Number of references: 25	Began second van route, pay mileage to parents who drive. Two 12-passenger vans were purchased. Transportation is provided by Head Start, Even Start van, and carpooling. Still unresolved. Unresolved due to insurance concerns. Rural projects will face this barrier. Carpools; hold activities within walking distance when possible. Researching feasibility of providing transportation to site. Need for transportation decreased by holding adult education at Even Start site. Provided a shorter day so school buses could be worked out. Head Start, Friends of Family committed vans for use during 93-94 year. Collaborating agency provided funding for the purchase of a bus. Contracted with co-located daycare to provide some transportation. Work with transportation companies and looking into future rural transportation system. City Schools has provided a bus to ease the transportation burden. Limited van pick-up to two sites. We have had to double up and make two routes, sometimes running class late. Coordinating services with the district's Transportation Department. Home-based model. Reimbursing parents and volunteers for mileage lessens some difficulties.

Exhibit 5.14
(continued)

Exhibit 5.14
(continued)

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
Financial Problems Number of References: 14	Continued to seek outside resources to fund program expansion. Tied in with regular AE programs as much as possible. Resourcefulness, creativity with regards to public solicitation. Funding will only get worse. Present to school boards; applied for grants; conducted a toy/book drive; contacted ICC members. Contacted parents on the waiting list as soon as a slot was available. Waiting list established; ongoing dialogue with the school district about the future of program. Chosen to apply for a new Even Start grant which will allow us to expand. In-kind employee contributions, donations from community and collaborating agencies.
Staff/Staffing Problems Number of references: 13	Specific training in team building and group process. Immediate problems resolved: good staff retained; less suitable staff left. Talked and supported each other; regular breaks; inservice training. Tried to implement a new model that provided more integrated activity. Called in more volunteers. The Even Start budget will be increased to allow teachers more time in the class. The organization that provides teachers will try harder to get committed teachers.
Facilities/Space / Equipment Problems Number of references: 12	PECO grant received for new building; to be completed fall 1994. Explored possibility of expanding to another school site. Still working on this. Moved once and acquired more space. Looked for a new space; hope to be in a different facility by fall. Rotated rooms; used outdoors when possible. Not really resolved, but adapted to the situation. Additional space provided by school district allows parent/child interaction.

Exhibit 5.14
(continued)

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
NEIS/Evaluation Problems	Completed intake forms during orientation instead of home visits. Less paperwork will be required, right? We still use the Denver Developmental Screening.

Exhibit 5.14
(continued)

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
Great Need/Number of clients Number of references: 5	Recruited volunteers to assist in classes; new collaborative argrement. Sought outside sources for various workshops, etc. In-kind employee contributions, donations from community and collaborating agencies.

Exhibit 5.14
(continued)

Project Implementation Barriers and Resolutions
(1992-93 Program Year)

Barriers	Resolutions
Lack of Support Services Number of references: 2	Met with supervisors to discuss these issues and work together to address them.
Complexity of Program Number of references: 1	Asked parents to view group sessions before committing.
Timing of Grant Award Number of references: 1	Under state administration, fiscal year is changed to July 1 to June 30.

Note: Based on reports from projects in Cohorts 1 and 2.

Exhibit 5.15

Features of the Even Start Law or Regulations That May Need to be Revised to Permit More Effective Implementation

Features of the Law	Number of Concerns		
	1990-91	1991-92	1992-93
Eligibility criteria	73	25	20
Program design	12	9	8
General evaluation concerns	25	13	9
NEIS forms/instruments	12	14	9
Four-year funding cycle	1	12	24
Timing of fiscal year	8	1	0
Other fiscal issues	6	4	4
Concerns about state control	1	4	7
Administrative concerns	15	2	2
Other	11	3	2

Exhibit reads: In 1990-91, 73 project directors identified eligibility criteria as a feature of the law that needed to be revised.
Note: Based on reports from projects in Cohorts 1 and 2.

Exhibit 5.16
(continued)

Abstracted Project Comments on Features of the Even Start Law or Regulations That May Warrant Revision (1992-93 Program Year)

Features of the Law	Commentary
Program Design	Clarify the number of families expected to be served at each project. Eliminate NDN requirement. Evaluation process doesn't measure Even Start family outcomes. Head Start restrictions cause planning problems. Mandate that Even Start, Head Start, and Chapter 1 work together. Need to give attention to prenatal instruction. Reconsider what counts as core service. Our two main components are not core. Rural programs need special design to accommodate transportation, childcare. Wording in Chapter 1 reauthorization should suggest coordination with Even Start.
General Evaluation Concerns	Clarify responsibility and extent of the "local" evaluation. Evaluation component doesn't help at local level. Outcome assessment should relate to project model of curriculum and instruction. Reporting periods should coincide with the school year. The evaluation design with pre- and post-tests for children is terrible.

Exhibit 5.16
(continued)

Abstracted Project Comments on Features of the Even Start Law or Regulations That May Warrant Revision (1992-93 Program Year)

Features of the Law	Commentary
NEIS Forms/Instruments	Collect data on ALL participants to reflect true level of family involvement. Correct the difference of difficulty between the post and pretest of CASAS. Eliminate interviews and testing of parents and children. Excessive amount of time needed to collect NEIS data. The instruments used do not necessarily measure parent effectiveness. Conduct more in-depth testing since CASAS doesn't render adequate information. NEIS should not require information on all families in project. New assessment instruments for non-English speakers. Paperwork in May is overwhelming. Revision of the testing requirements (paperwork is quite extensive). Space on Form II's did not allow for enough core service hours for children. Too much paperwork. Use Dunst Family Strength Assessment, Infant Monitoring Questionnaire, & Early Screening Inventory

Exhibit 5.16
(continued)

Abstracted Project Comments on Features of the Even Start Law or Regulations That May Warrant Revision (1992-93 Program Year)

Features of the Law	Commentary
Four-Year Funding Cycle	Four-year grant does not allow sufficient time for implementation. Fourth year projects who have met the Even Start requirements should have funding continued. Find a way for projects in years 5-8 to continue to be funded. Allow continued federal funding of model or outstanding programs after four years. Allow continuity of established programs. More than four years of funding to successful programs. Allow funding for program past four years. Amend law to fund successful programs first, then new programs. Consider funding exemplary projects beyond the four-year cycle. Continuation grant to programs after initial four-year demonstration period. Continuation of funding would assure continuity in staffing. Continue funding for projects meeting goals and objectives. Even Start should be funded as categorical aid rather than as demonstration projects. Fifth year funding is needed to continue project. Four years of funding is inadequate. Four-year limitation on funding has negative impact on attitudes. Make funding on a permanent basis, and contingent on demonstrated success. Give projects more than four years to implement. Grant cycle needs to be longer than four years. Longer range funding would permit more effective implementation. Do not limit funding to four years. Ongoing funding: eliminate/revise the "seed money" notion. Projects in fourth year are unclear about second cycle of funding. Remove regulation forcing fourth year programs to compete with new programs for funding. States should be encouraged to fund projects after four years at the 40% match.

should be interpreted with caution. A priority listing would be better, giving all projects the chance to consider each potential area of need. Nonetheless, responses of projects to the open-ended item gives a rough indication of the prevalence of certain needs. The responses presented here are limited to those from Cohorts 3 and 4, as those projects are most likely to need assistance.

Exhibit 5.17 shows that the two most frequent technical assistance needs identified by Cohort 3 and Cohort 4 projects were for assistance in reaching and recruiting "hard-to-reach" parents (62 percent) and for information on other Even Start projects (49 percent). About one-third of the projects requested technical assistance in each of several different areas including the evaluation; integration of core services; home visiting; interagency collaboration; and accessing resources, transportation and job training. One-quarter of the projects asked for assistance with cross-project sharing and cooperative relationships, and 18 percent wanted assistance with Spanish language literacy.

Exhibit 5.17

Areas of the Program for Which Technical Assistance Is Wanted (1992-93 Program Year)

	Percent of Projects
Reaching hard-to-reach parents	62%
Information on other Even Start projects	49%
Evaluation	35%
Integrating core services	34%
Home visits	32%
Interagency collaboration	32%
Accessing resources/transportation/job training	30%
Cross project sharing/cooperative relationships	24%
Spanish language literacy	18%

Exhibit reads: 62 percent of Cohort 3 and 4 projects requested technical assistance on reading "hard-to-reach" parents.
Note: Based on reports from projects in Cohorts 3 and 4.

Staffing Even Start Projects

Information about the staff involved in Even Start projects comes from two forms added to the NEIS for the 1992-93 data collection. One form was filled out by individual Even Start staff members and the other was completed by project directors. Even Start staff

Exhibit 5.18

Job Categories of Even Start Staff (1992-93 Program Year)

Job Category	Percent of Projects[a]	Average Number of Staff Per Project[b]
Project administrator	87%	1.7
Early childhood education		
Coordinator	40%	1.3
Instructor	76%	4.1
Aide	58%	3.7
Adult education		
Coordinator	36%	1.4
Instructor	68%	3.3
Aide	22%	2.3
Parenting education		
Coordinator	29%	1.1
Instructor	58%	3.2
Aide	27%	3.2
Family recruitment	22%	2.4
Case management	36%	2.8
Evaluation	45%	1.6
Clerical	66%	1.4
Support services	43%	3.4

Exhibit reads: 76 percent of Even Start projects have early childhood education instructors, with an average of 4.1 instructors per project.
[a]Based on 270 out of 340 projects reporting staff information; includes only staff paid by Even Start or the local match.
[b]Reflects average number of staff among projects with staff in that job category.

Exhibit 5.19: Duties Performed by Even Start Project Administrators (1992-93 Program Year)

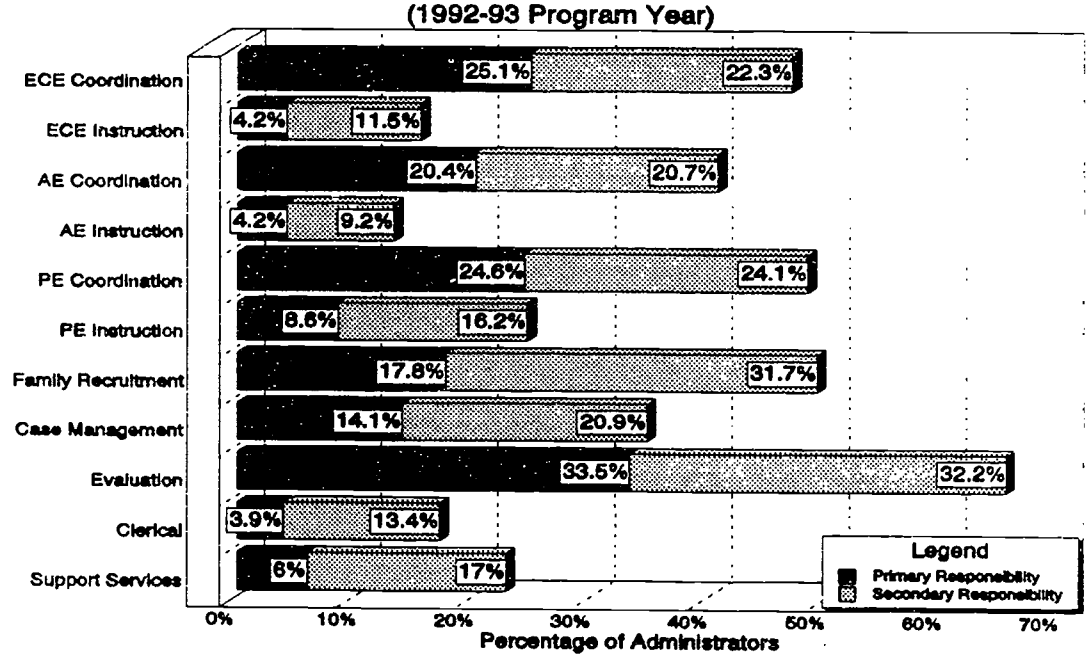


Exhibit reads: 25.1 percent of project administrators have primary responsibility for coordination of early childhood education.
Note: Based on 382 project administrators in 270 projects.

As might be expected, teachers and coordinators are most likely to have job responsibilities providing direct instruction or supervision in Even Start core services (Exhibit 5.20). In some projects, they may be asked to assist with recruitment, case management, or evaluation activities.

Although Even Start teachers play multiple roles within the project, it appears that the majority of teachers (78 percent) have instructional responsibilities in only one core service (Exhibit 5.21). Eighteen percent teach in two core services, with early child education and parenting being the most [illegible]

Exhibit 5.20: Duties Performed by Even Start Teachers and Coordinators (1992-93 Program Year)

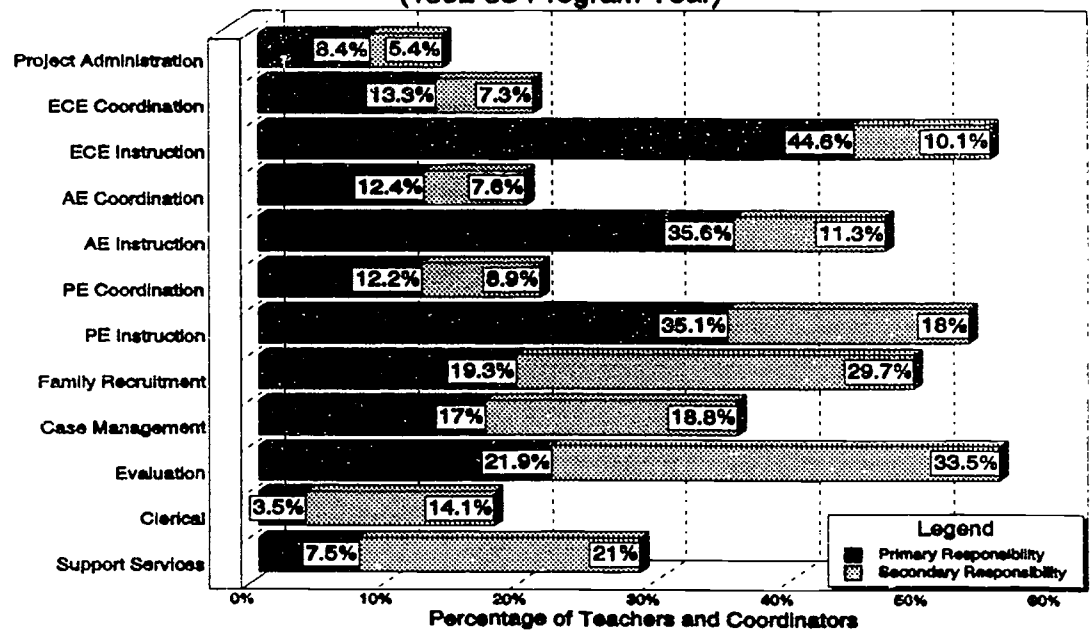


Exhibit reads: 44.6 percent of Even Start teachers and coordinators provide early childhood instruction as a primary responsibility.
Note: Based on 1784 Even Start teachers and coordinators in 270 projects.

Exhibit 5.21

Even Start Teachers with Multiple Instructional Responsibilities (1992-93 Program Year)

Number of Instructional Areas	Percent of Teachers
One	78%
Two	
Adult education and parent education	4%
Early childhood and parent education	10%
Early childhood and adult education	4%
Three	4%

Exhibit reads: 4 percent of Even Start teachers provide instruction in both adult education and parenting education.
Note: Based on 520 teachers in 270 projects.

Funding Sources

Staff providing Even Start services may be paid by one of three funding sources: federal Even Start funds, local matching funds, or through collaborating agencies. As Exhibit 5.22 shows, collaborating agencies cover the costs of 54 percent of the staff who provide Even Start services.

Exhibit 5.22: Source of Funding for Staff Providing Even Start Services (1992-93 Program Year)

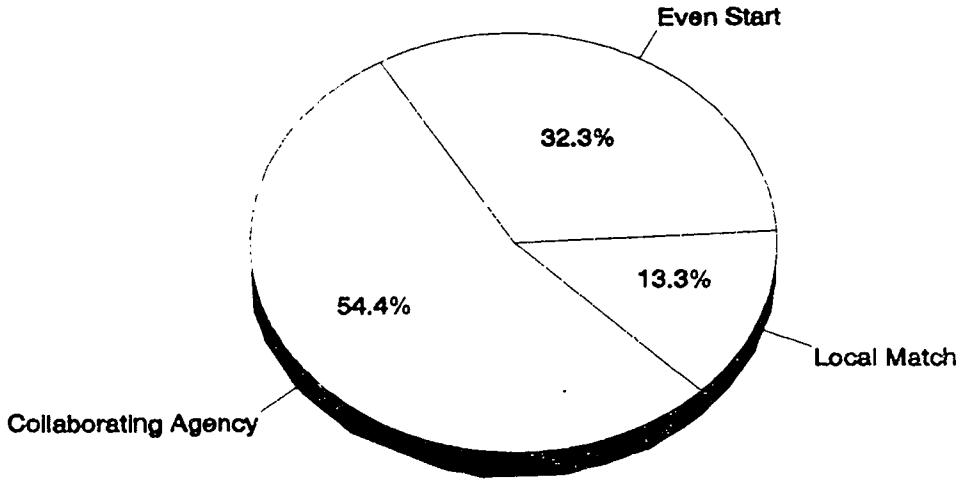


Exhibit reads: Federal Even Start dollars pay for 32.3 percent of staff providing Even Start services.
Note: Based on 270 out of 340 projects.

Looking more closely at the type of staff from collaborating agencies (Exhibit 5.23), we see that the largest proportion of collaborating agency staff provide direct instruction in early childhood education (53 percent) and adult education (60 percent). Collaborating agency staff are much less likely to provide parenting education.

The prevalence of staff from collaborating agencies may be somewhat exaggerated by the fact that many staff may have limited involvement with Even Start. For example, an early childhood education teacher at a collaborating agency may have only one or two Even Start children in her classroom. Another difficulty with the percentages in Exhibit 5.22 is that some staff from collaborating agencies may be double-counted in the local match.

Restricting the funding sources to federal Even Start dollars and local matching funds, we find that in Cohort 1 and 2 projects, 62 percent of project staff are paid with federal dollars. Conversely, 38 percent of project staff are paid through the local matching funds. This breakdown was fairly consistent across job categories, with the exception of the

Exhibit 5.23

Job Categories of Staff from Collaborating Agencies (1992-93 Program Year)

Job Category	Percent of Projects[a]	Average Number of Staff Per Project[b]
Early childhood education		
Administrator	52%	3.0
Instructor	53%	8.2
Aide	46%	7.1
Adult education		
Administrator	48%	2.2
Instructor	60%	5.3
Aide	24%	2.8
Parenting education		
Administrator	31%	2.3
Instructor	36%	3.6
Aide	19%	2.7
Total	**64%**	**30.1**

Exhibit reads: 52 percent of Even Start projects have an administrator in early childhood education from a collaborating agency.
[a]Based on 270 projects reporting.
[b]Reflects average number of staff among projects with collaborating agency staff in that job category.

following job categories where more than 75 percent of staff were paid with federal Even Start funds: aide in early childhood education classroom; instructor, coordinator or aide in parenting education; case management; and program evaluation.

In Cohort 3 and 4 projects, 15 percent of project staff are paid by federal Even Start dollars and 25 percent through the local match. The differences between the earlier and later cohorts reflect that a project's local match requirement increases over the four years of the project.

Part-Time and Full-Time Status of Staff

Overall, 23 percent of Even Start staff work at least 1200 hours per year for the project (Exhibit 5.24), which translates into about 35 hours per week for nine months and was considered full-time. Approximately 38 percent work part-time (defined as between 300

Exhibit 5.24

Part-time and Full-time Status of Even Start Staff (1992-93 Program Year)

Job Category	Percent of Staff		
	Limited Part-time (<300 hours/yr.)	Part-time (300-1200 hours/yr.)	Full-time (>1200 hours/yr.)
Project administrator	31%	29%	39%
Early childhood education			
Coordinator	26%	35%	39%
Instructor	25%	43%	31%
Aide	25%	51%	25%
Adult education			
Coordinator	42%	28%	30%
Instructor	42%	38%	21%
Aide	30%	42%	29%
Parenting education			
Coordinator	23%	38%	39%
Instructor	20%	45%	34%
Aide	14%	45%	41%
Family recruitment	19%	35%	46%
Case management	23%	35%	42%
Evaluation	46%	27%	27%
Clerical	35%	39%	26%
Support services	49%	43%	8%
TOTAL	**38%**	**38%**	**23%**

Exhibit reads: 39 percent of project administrators work full-time for Even Start.
Note: Based on 270 out of 340 projects.

and 1200 hours per year) and another 38 percent work on a limited part-time basis for the project (less than 300 hours a year).

Full-time staff are more likely to provide early childhood or parenting education. In contrast, adult educators are more likely to work on a limited part-time basis for Even Start. Staff involved in evaluation, clerical work and support services work are also more likely to work for Even Start on a limited part-time basis.

As Exhibit 5.25 shows, more than half of the staff paid through the local match work on a limited part-time basis for Even Start. It is likely that these individuals have additional responsibilities with the local matching agency (e.g., school district, community college) for the remainder of their time. Only 10 percent of staff paid through the local match work full-time for Even Start. In contrast, 31 percent of staff paid directly through the Even Start grant work full-time.

Exhibit 5.25: Part-Time and Full-Time Status by Funding Source (1992-93 Program Year)

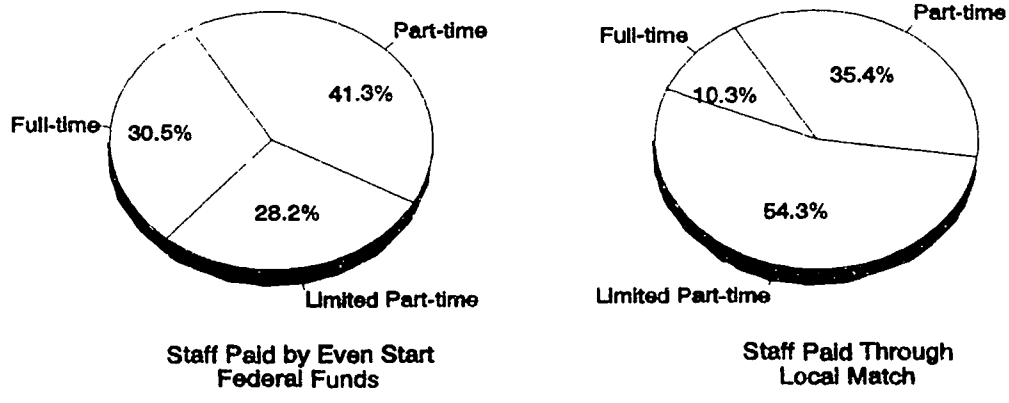


Exhibit reads: 41.3 percent of staff paid by Even Start work full-time for the program, compared with 10.3 percent of staff paid through the local match.
Note: Based on 270 out of 340 projects.

Using Volunteers

Forty-four percent of Even Start projects use volunteers in the delivery of early childhood education (Exhibit 5.26), with an average of 14 volunteers per project. Volunteers are less prevalent in adult education and parenting education. Approximately 27 percent of projects use volunteers for general program support.

In response to open-ended questions about minimum qualifications for volunteers in the core service areas, project directors from Cohort 1 and 2 projects listed criteria related to personality traits, education and experience. Some projects require volunteers to have certain minimum qualifications, while others interpret the notion of "qualification" more loosely, suggesting in their responses that they look for certain skills or personal characteristics in potential volunteers but do not have minimum requirements.

Exhibit 5.26

Use of Volunteers in Even Start Projects (1992-93 Program Year)

Job Category	Percent of Projects[a]	Average Number of Volunteers Per Project[b]
Early childhood education	44%	14.0
Adult education tutor[c]	28%	4.9
Adult education aide[d]	25%	4.3
Parenting education	31%	9.0
General support	27%	7.5

Exhibit reads: 44 percent of Even Start projects use volunteers in early childhood education, with an average of 14 volunteers per project.

[a]Based on 270 out of 340 projects.

[b]Reflects average number of volunteers among projects using volunteers in that job category.

[c]Provides all adult education; does not assist adult education instructor.

[d]Provides tutorial or other support to adult education instructor.

For the most part, projects choose volunteers for parenting education based on their experience and education. Most frequently, projects seek "experts in their field" to volunteer in this area, inviting members of the community to teach parenting topics and recruiting speakers from local community agencies. A number of projects choose volunteers for parenting education based on personal traits, such as empathy, commitment, and desire to work with educationally disadvantaged adults.

Staff Work Experience

Even Start project administrators have an average of nearly 9 years of experience working in early childhood education programs (Exhibit 5.27). The work experience of administrators is lower in adult education programs (4.3 years) and parenting education programs (5.8 years). This suggests that Even Start directors are more likely to come from programs for children and parents than from direct experience in adult education programs.

Teachers and coordinators of early childhood education also have roughly 10 years of work experience in their field (Exhibit 5.27). Teachers have an average of 8 years of work experience and coordinators have an average of 11 years of experience in that field. Parenting education coordinators tend to have more experience in early childhood programs (9 years) than in parenting education programs (6 years). This also is true for parenting education instructors, who report an average of 7 years of experience in early childhood education and less than 4 years of experience in parenting education. However, it is important to keep in mind that staff have responsibilities in more than one core service. Thus, the coordinators of early childhood education also may take on the role of parenting coordinator. In addition, early childhood education programs have a longer tradition than parenting programs.

Adult education coordinators have an average of 7 years of experience with adult education programs. Adult education teachers in Even Start have an average of 5 years experience in adult education programs, nearly the same amount of experience as they have in early childhood programs.

Exhibit 5.27 includes individuals with no experience in a field, which has the potential to lower the average values. To look at work experience another way, Exhibits 5.28, 5.29 and 5.30 depict the percentage of staff who have one to five years of experience, six to 10 years of experience and more than 10 years of experience in their field.

While giving the same general message as the average values, Exhibit 5.28 points out more clearly the extensive experience in early childhood education among Even Start staff who provide services in that core service. Approximately 35 percent of project administrators and 45 percent of early childhood coordinators have more than 10 years of work experience in early childhood education. Teachers are more evenly divided among the work experience categories, with nearly 30 percent having more than 10 years of experience. As would be expected, most classroom aides have between one and five years of experience in the field.

Exhibit 5.27

Average Years of Work Experience Among Even Start Staff by Content Area (1992-93 Program Year)

Job Category	Average Years of Work Experience		
	Early Childhood Education	Adult Education	Parenting Education
Project administrator	8.8	4.3	5.8
Early childhood education			
Coordinator	11.3	2.8	5.5
Instructor	7.9	1.4	2.5
Aide	4.8	0.9	1.4
Adult education			
Coordinator	5.7	6.9	3.9
Instructor	4.6	4.8	2.2
Aide	3.8	2.9	2.2
Parenting education			
Coordinator	9.3	4.8	5.9
Instructor	6.7	3.1	3.9
Aide	4.5	2.2	2.8

Exhibit reads: On average, Even Start project administrators have 8.8 years of experience in early childhood education.
Note: Based on 270 out of 340 projects. Individual staff may appear in more than one job category.

In contrast to early childhood education, staff in adult education are much less likely to have more than 10 years of work experience in their field. Only 25 percent of adult education coordinators and 11 percent of adult education teachers have more than 10 years of work experience in adult education. Nearly half of the staff who provide direct instruction in adult education for Even Start have less than five years of experience. However, it is important to keep in mind that this information includes only staff who are employed by Even Start, not staff from collaborating agencies. This limits our ability to make inferences about the general level of experience of all staff who provide adult education to Even Start participants.

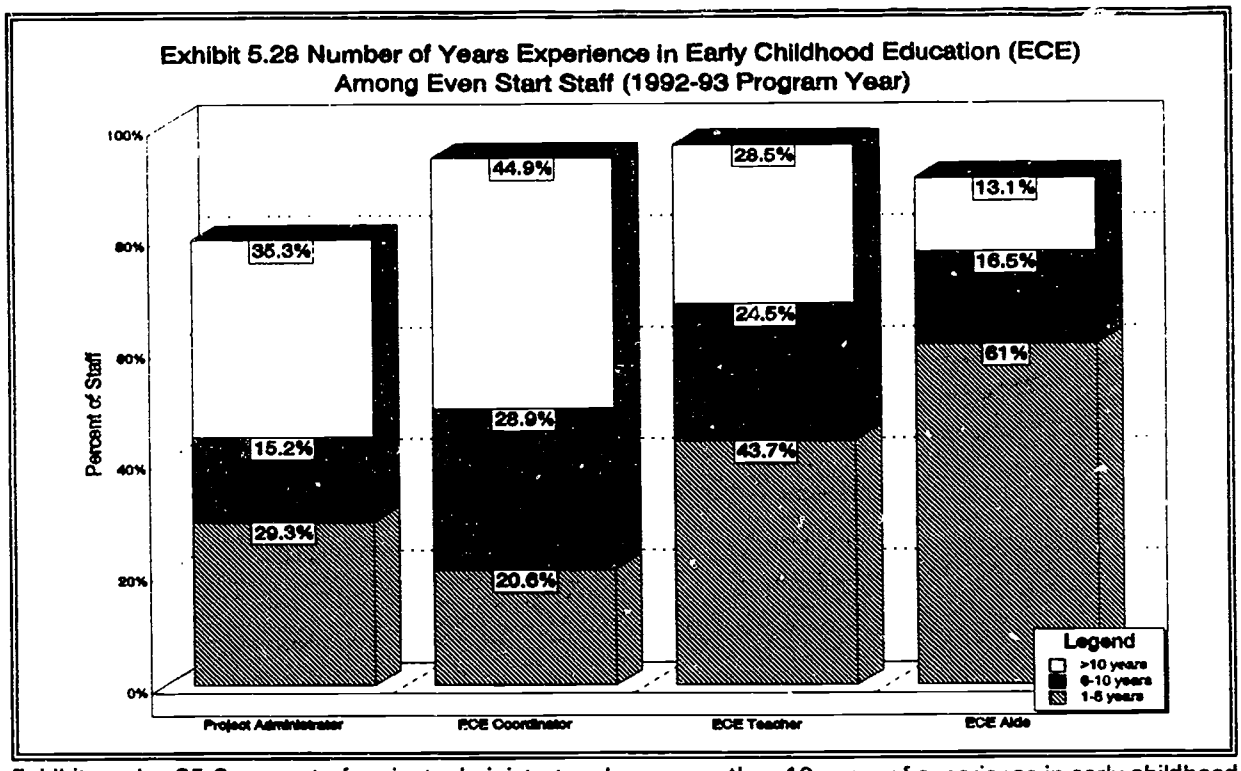


Exhibit reads: 35.3 percent of project administrators have more than 10 years of experience in early childhood education.
Note: Based on 270 out of 340 projects.

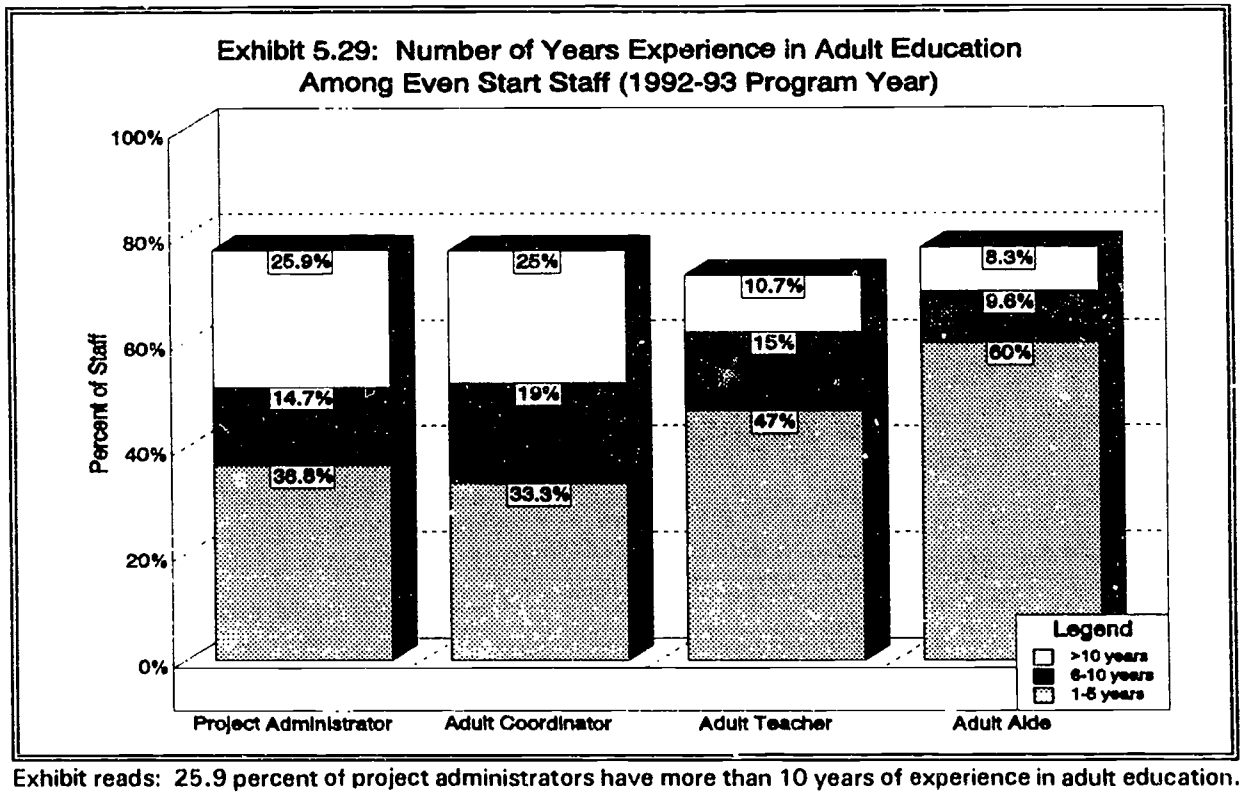


Exhibit reads: 25.9 percent of project administrators have more than 10 years of experience in adult education.
Note: Based on 270 out of 340 projects.

projects are more likely to have advanced degrees than teachers in the other two core service areas.

Exhibit 5.33 shows the content areas of degrees held by Even Start staff for individuals with at least an associate's degree. Staff may hold degrees in more than one content area (e.g., a bachelor's degree in elementary education and a master's degree in child development, or a major in elementary education and a minor in language arts). The most prevalent content areas focus on education of young children, including early childhood education and elementary education. In contrast, a small percentage of Even Start instructional staff have training in adult education, language arts or English as a second language.

Taken together, these results indicate that Even Start staff are likely to have a college degree but not always in fields specific to instruction in literacy or adult education. This is likely to be due, in part, to the greater prevalence of degree programs in elementary and early childhood education.

Inservice Training and Staff Development

Even Start staff were asked to indicate the type and length of inservice training received between January and June of 1993. Examples of inservice training or staff development activities include formal course work, conferences relevant to Even Start, and staff seminars. It does not include general staff meetings or curriculum planning sessions.

Among Cohort 1 and 2 projects, 82 percent of Even Start instructional staff report at least one training session during the six-month period. In about 40 percent of projects, all (100 percent) of the instructional staff have attended at least one training or staff development activity.

On average across projects, staff report about 40 hours of inservice training, although there is a considerable range among projects in the average hours of inservice training. In approximately 5 percent of projects, staff report less than 10 hours of inservice or staff development activities. At the other extreme, staff in 5 percent of projects report more than 100 hours of inservice or staff development.

Exhibit 5.34 presents the average number of hours of training and average number of inservice sessions by various job categories across all projects (Cohorts 1, 2, 3 and 4). Project administrators and coordinators tend to report the greatest number of sessions and largest number of hours of inservice training, with an average of approximately seven to 10 sessions over six months and approximately 65 total hours during that period. Staff involved in family recruitment also report similar staff development or inservice experiences. Aides in early childhood and adult education report about half that number of sessions and hours.

Exhibit 5.34

Amount of Inservice Training Received by Even Start Staff (1992-93 Program Year)

Job Category	Average Number of Sessions	Average Number of Total Hours
Project administrator	7.7	63.5
Early childhood education		
Coordinator	8.2	66.1
Instructor	6.8	47.7
Aide	5.7	46.7
Adult education		
Coordinator	7.5	67.6
Instructor	5.9	42.8
Aide	5.5	46.6
Parenting education		
Coordinator	8.6	63.7
Instructor	8.6	56.5
Aide	7.9	57.0
Family recruitment	8.8	68.6
Case management	7.9	57.3
Evaluation	7.7	54.0
Clerical	4.0	30.5
Support services	3.7	31.9

Exhibit reads: Project administrators, on average, attend 7.7 inservice training sessions a year for a total of 63.5 hours.
Note: Based on 270 out of 340 projects. Individual staff may appear in more than one job category.

Exhibit 5.35: Providers of Inservice Training to Even Start Staff (1992-93 Program Year)

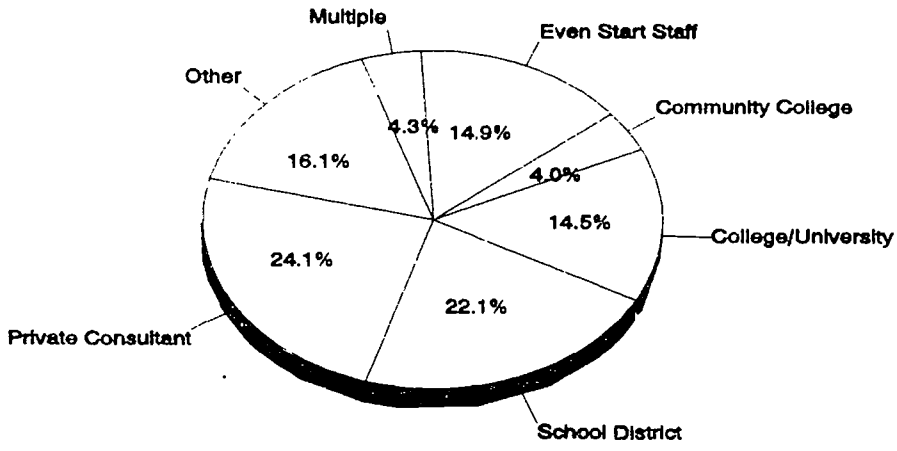


Exhibit reads: 24.1 percent of inservice hours are provided by private consultants.
Note: Based on 270 out of 340 projects.

Exhibit 5.36: Content Area of Inservice Training (1992-93 Program Year)

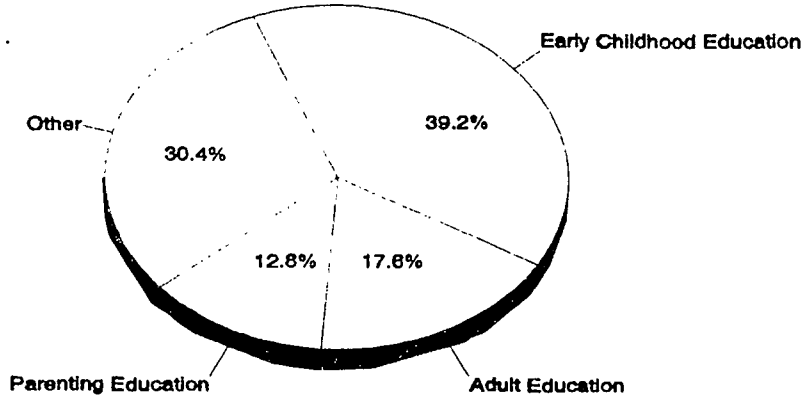


Exhibit reads: 39.2 percent of inservice training sessions for Even Start staff focus on early childhood education.
Note: Based on 101 Cohort 1 and 2 projects.

training for the implementation of High/Scope and other preschool curricula. Even Start staff also attended workshops on home visiting, cooperative learning, special needs children, emergent literacy, children's literature, whole language, and the use of manipulatives with young children. Projects sent staff to the National Association for the Education of Young Children and related state and regional conferences. Evaluation issues were addressed in alternative assessment workshops and trainings for various testing instruments. Staff learned about social issues affecting children in workshops on child abuse, health issues, and multicultural topics.

Specific topics in adult education included the GED certificate, math for adults, reading for low-level learners, issues in bilingual education, and the integration of technology into

position on either program, but to evaluate the effects of the

Some responded to the question more generally by advising new projects to provide frequent professional development opportunities for staff, to encourage life-long learning for all staff, and to conduct a staff needs assessment to determine what kinds of professional development activities staff would find most beneficial.

In addition to providing formal staff development activities, Cohort 1 and 2 projects reported that they provided for staff development in other ways. In response to an open-ended question which asked projects to describe informal staff development activities and comment on the usefulness of these activities, about one-third of the projects provide for staff development through regular staff meetings. Several projects described mentoring relationships among staff and other opportunities for staff to pursue their own professional development plans. A number of projects commented that Even Start staff could access training provided by the school district or other agencies. Staff also learned from each other by visiting or sharing ideas with other Even Start projects, sharing feedback and working as a team. A few projects provided for staff development through computer linkages with other projects, staff journal writing activities, and interaction with community agencies.

Project Directors' Recommendations about Even Start Staff

Guided by a series of three open-ended questions, each Cohort 1 or 2 project director was asked to offer staffing advice to new projects. Common themes addressed by project directors include the value of using a team approach to staffing, establishing clear job descriptions, allowing staff to play flexible roles, and hiring staff with a variety of personal characteristics and professional backgrounds. Projects generally found full-time staff more desirable than part-time staff. Directors also cited frequent, relevant professional development activities as a critical element in the success of the program. Specifically, projects described the following staffing principles:

- **Use a team approach to staffing.** Projects commented that staff working in teams effectively supported the delivery of integrated services that characterize family literacy programs. Projects reported that a team approach to staffing worked well because it allowed for joint planning and the sharing of job responsibilities to best meet client needs. In addition, teams facilitated cooperation and reciprocity between the child and adult components to create a necessary linkage between family learners.

  Some projects reported they were implementing the team staffing model recommended by the National Center for Family Literacy (the Kenan Model), which includes teams of two teachers and an educational assistant; others used teams of one teacher and two aides. Depending on the needs of the target community, some projects added other members to the three-instructor model, such as a social worker, home nutritionist, or child care aide.

- **Establish clear job descriptions.** Projects stressed the importance of establishing job descriptions that are clear but not too rigid. Job descriptions should reflect the needs of clients, including flexible schedules, and allow staff to share responsibility for the delivery of various services as needed. Many projects stressed the importance of staff responsiveness to the needs of the target community, implying that new projects may find it useful to complete a needs assessment prior to establishing job descriptions and hiring staff.

- **Utilize staff in flexible roles; integrate responsibilities.** In general, projects indicated that the more integrated the approach to staffing the better. For example, in many cases early childhood and adult education staff share responsibility for the parenting component and directors frequently encourage staff to understand the job responsibilities of their co-workers. Projects found it useful to have versatile, knowledgeable team players who can readily adapt and fill in for other members of the team when needed.

  Many projects highlighted the importance of hiring detail-oriented clerical staff; qualified, experienced instructional staff; an on-site, full-time director; and a social worker or case manager. Although few projects reported having case managers, recruiters, or social workers on staff, those that did indicated that these individuals were critical members of their staff teams.

- **Seek enthusiastic and sensitive staff.** Projects emphasized the importance of hiring qualified, committed, well-trained staff who are sensitive to the needs of disadvantaged families, as well as culturally and linguistically representative of the population to be served. According to many projects, the personality and enthusiasm of staff were critical when it came to getting the program started and gaining the trust of participants. In addition to enthusiasm, projects recommended hiring flexible, creative, non-judgmental, and sincere staff members.

- **Hire staff with a variety of backgrounds.** Because Even Start programs provide a variety of services and levels of interaction to a diverse population, projects advocated hiring staff of varied ages, races, backgrounds, and personality styles. Projects found that this practice of striving for a balanced group of staff enhanced the interdisciplinary nature of the family literacy program, facilitated collegial interactions among staff, and increased the likelihood that staff would really connect with participants. A mixture of paraprofessional and professional employees was generally cited as an arrangement that worked well. Some projects found that clients worked especially well with staff who had been hired from the community served by the project.

- **Employ qualified staff.** Projects cautioned against hiring individuals who are not qualified for their jobs. For example, projects mentioned as problematic hiring staff who did not speak the primary language of participants, who did not possess the skills necessary to be successful in their jobs, or who lacked postsecondary education. These under-qualified employees required more supervision, training, and direction than staff who were qualified for their jobs when they were hired. At the same time, however, other projects stressed the importance of not limiting the job responsibilities of staff based solely on a lack of formal education or experience. The responses of some directors indicated that they had struggled with trying to find a balance between hiring staff reflective of the client population and staff with the skills, education, and experience necessary to do the job.

- **Use full-time staff.** When commenting about staffing arrangements that did not work well, projects cited utilizing staff in part-time

This evaluation has multiple measures of program participation. One measure comes from an annual interview with a family member, usually the mother, conducted by Even Start staff. On the interview form, project staff indicate whether, during the year, the family was an active participant in each of the three core services. This judgment on the part of the project staff member provides a binary measure of participation in each core service area for each family for each year of the evaluation. A second measure of program participation comes from monthly "contact logs" that are used by project staff to record the number of hours of participation each month by each family in each core service area.[4] Contact log data are matched against the annual interview data, and a family is

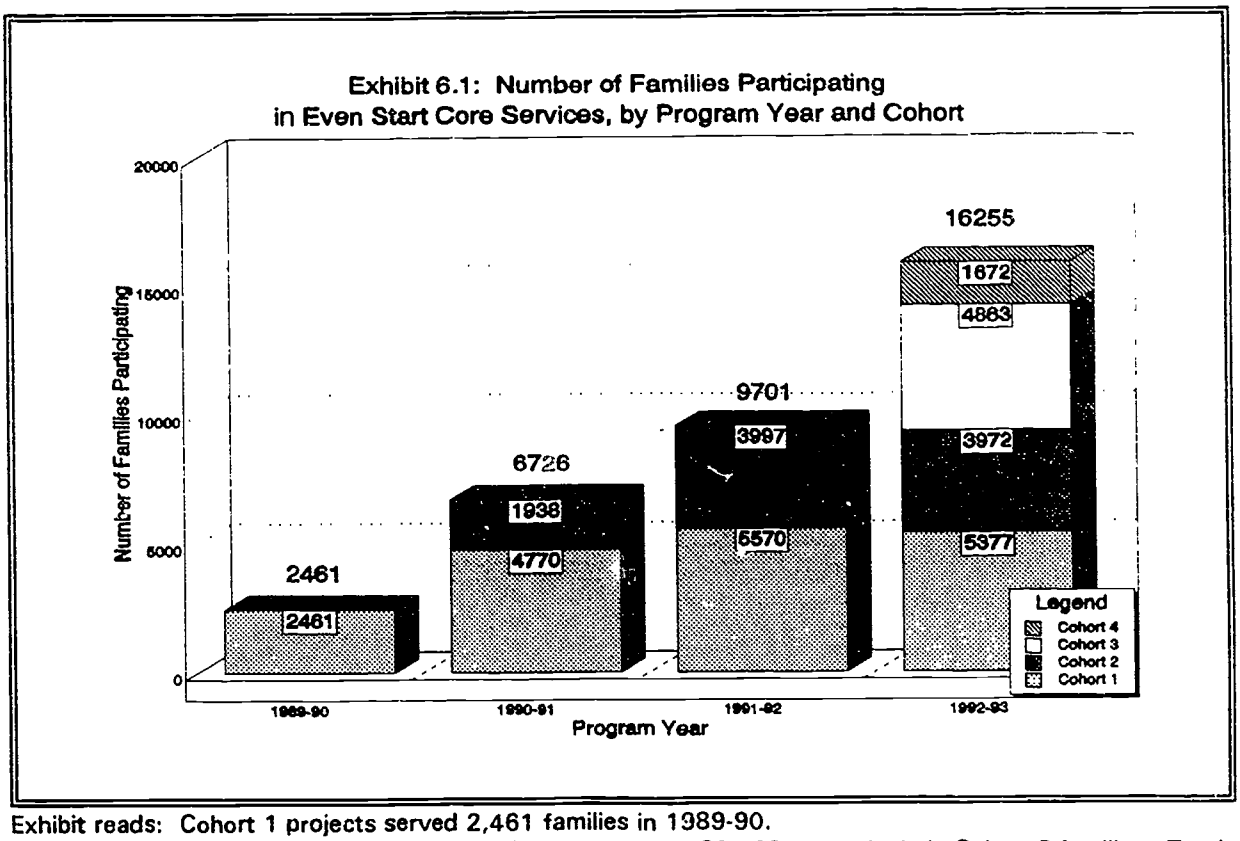


Exhibit reads: Cohort 1 projects served 2,461 families in 1989-90.
Note: Based on reports from 270 of 340 projects. Data for 1991-92 do not include Cohort 3 families. Totals include families in migrant projects.

year). Thus, the same projects, with the same level of resources, were able to serve more than twice as many families in their third and fourth years of operation as in their first year.

The large increases in numbers of families served over time can be attributed to the projects' need to deal with normal implementation problems in the first year of program operations (e.g., time had to be spent defining the program, recruiting staff, setting up operations) and the general difficulty of starting up a new program. Once these problems were solved projects became more efficient, with the extra time and resources being devoted to recruiting and serving additional families.

A similar pattern is seen for Cohort 2 projects. A total of 1,938 families (average of 44 families per project) were served in Cohort 2 projects during 1990-91 (their first year of operations), and 3,997 families (average of 91 families per project—a 106 percent increase) were served in 1991-92. This seems to represent steady-state operations for Cohort 2, since participation was relatively unchanged in Cohort 2's third year of service (3,972 families, an average of 90 families per project).

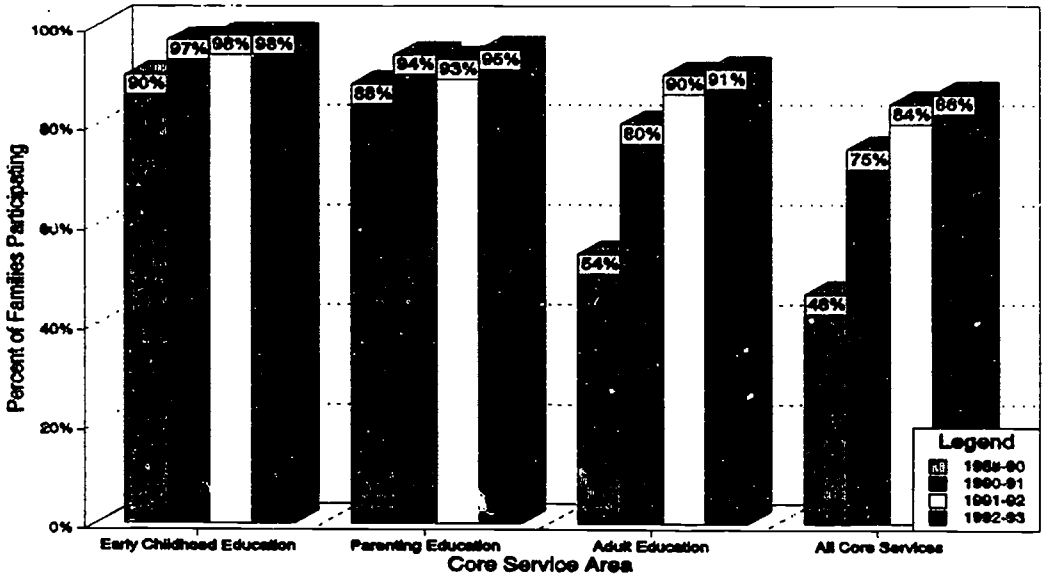
Participation Rates For Each Core Service

The Department of Education expects that all Even Start families will participate in each of the three core service areas during their time in the program. Exhibit 6.2 shows the percentage of families that participated in each core service area during the four years of study for the 120 projects in Cohorts 1 and 2. Almost all Even Start families had a child that participated in early childhood education during each year of the evaluation: 90 percent participated in 1989-90, 97 percent in 1990-91, and 98 percent in 1991-92 and in 1992-93. Participation rates for parenting education were a little lower: 88 percent of families had a participating adult in 1989-90, 94 percent in 1990-91, 93 percent in 1991-92, and 95 percent in 1992-93. At the beginning of Even Start, participation rates were lowest for adult education (54 percent in 1989-90). The Department of Education provided technical assistance to local projects and participation in adult education increased to 80 percent in 1990-91, to 90 percent in 1991-92, and to 91 percent in 1992-93. The percentage of families that participated in all three core service areas increased over the four years of study, from 46 percent to 75 percent to 84 percent to 86 percent.

The relatively low participation rates for projects in Cohorts 3 and 4 (see Exhibit 6.3) reflect the new funding status of those projects. During 1992-93, 88 percent of the Even Start families in these cohorts had a child who participated in early childhood education, 73 percent had an adult who participated in parenting education, 79 percent had an adult who participated in adult education, and 52 percent participated in all three core services. Participation rates for Cohort 1 and 2 projects were similarly low during their first year of operation.

Each year approximately 10 to 15 percent of Even Start families participate in one, but not both, of the adult-focused core service areas. Exhibit 6.4 contains detailed data on the number and percentage of participants [illegible]

Exhibit 6.2: Percent of Families Participating in Even Start Core Services, by Program Year, for Cohorts 1 and 2



Exhibits reads: 90 percent of Even Start families in Cohorts 1 and 2 had a child who participated in early childhood education during the 1989-90 program year.
Note: Based on reports from 120 projects.

Exhibit 6.3: Percent of Families Participating in Even Start Core Services, 1992-93, for Cohorts 3 and 4

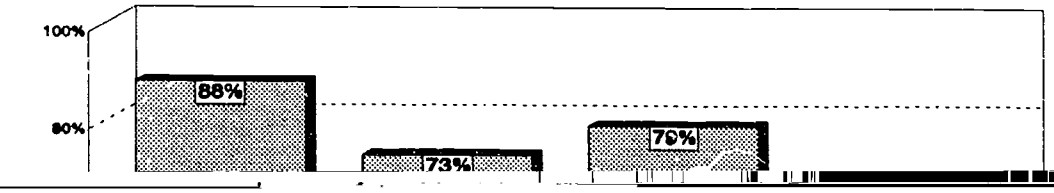


Exhibit 6.4: Number and Percent of Families Participating in Even Start Core Services (1989-93)

Core Service	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Migrant	Total
1989-90 Participation						
Adult education	54%					54%
Parenting education	88%					88%
Early childhood education	90%					90%
Adult ed. or parenting ed.	95%					95%
Adult ed. and parenting ed.	46%					46%
All core services	46%					46%
Total number of families	n=2,461					n=2,461
1990-91 Participation						
Adult education	80%	81%			100%	80%
Parenting education	94%	93%			94%	94%
Early childhood education	97%	97%			100%	97%
Adult ed. or parenting ed.	99%	96%			100%	98%
Adult ed. and parenting ed.	75%	78%			94%	76%
All core services	74%	77%			94%	75%
Total number families	n=4,770	n=1,938			n=18	n=6,726
1991-92 Participation						
Adult education	89%	91%	na		84%	90%
Parenting education	93%	93%	na		99%	93%
Early childhood education	98%	98%	na		100%	98%
Adult ed. or parenting ed.	98%	98%	na		100%	98%
Adult ed. and parenting ed.	85%	86%	na		84%	85%
All core services	84%	84%	na		84%	84%
Total number of families	n=5,570	n=3,997	na		n=134	n=9,701
1992-93 Participation						
Adult education	90%	91%	82%	72%	64%	85%
Parenting education	95%	95%	77%	70%	50%	86%
Early childhood education	97%	99%	88%	88%	88%	91%
Adult ed. or parenting ed.	99%	99%	na	na	na	na
Adult ed. and parenting ed.	86%	88%	na	na	na	na
All core services	85%	87%	57%	43%	36%	72%
Total number of families	n=5,377	n=3,972	n=4,863	n=1,672	n=371	n=16,255

Exhibit reads: 54 percent of all Even Start families had an adult who participated in adult education during the 1989-90 program year.
Note: Based on reports from 270 of 340 projects.
na: Data not available.

Start. Similar questions were asked in the In-Depth Study, where 40 percent of the parents responded that they had participated either in adult basic education, GED preparation, or English-as-a-second language programs during the past year. The higher pre-Even Start participation rate for the In-Depth Study group may occur because the In-Depth Study sites overrepresent Hispanics, who are more likely than English-speakers to enroll in English-as-a-second language programs. In any case, data from the NEIS show that in the third and fourth years of program operations, over 90 percent of Even Start adults participated in adult education.[6]

Parenting Education

Prior to joining Even Start, few parents had been involved in parenting education. Parents were asked questions about previous participation in parenting education programs as part of the In-Depth Study but not as part of the NEIS. Eight percent of the parents in the In-Depth Study indicated that they had taken part in a parenting education program prior to Even Start. Data from the NEIS show that in each year of program operations, over 90 percent of Even Start adults participated in parenting education.

Early Childhood Education

Determining the extent to which children would participate in early childhood education programs in the absence of Even Start is difficult, because Even Start serves children from birth to age eight, and early childhood education participation rates differ by age. In spite of this problem, Even Start parents were asked about the prior formal educational experiences of their child. Their responses (across all ages of children eligible for Even Start) indicated that 64 percent of children in Even Start had no prior formal educational experience, 14 percent had participated in Head Start, 13 percent took part in some other preschool, 12 percent were in kindergarten, and 5 percent were in primary school.

It is not possible to disaggregate the Even Start data by age of child, and so data from the national longitudinal study of Chapter 1 were used to provide additional information on this issue. According to Puma et al. (1993), 26 percent of Chapter 1 students had participated in Head Start, and 35 percent had participated in some other preschool, a total of 61 percent. It makes sense that these percentages are higher than those reported by Even Start parents, because the Chapter 1 data were reported for first-grade children, whose parents were able to reflect on their child's entire preschool experience. On the other hand, Even Start parents' reports of preschool experiences were limited by the age of the child--if a child was three years old at entry to Even Start, that child could not have participated in Head Start. Because of this problem, the Chapter 1 estimate of preschool participation is likely to be a better estimate of the typical early childhood education

[6]Families had to participate in at least one core service in order to be counted as a program participant. We know that some families were recruited but never participated, and these were not counted.

participation rate for a disadvantaged population than the statistics provided by Even Start parents.

A recent analysis by the U.S. General Accounting Office (1993) relies on Census data and provides estimates of preschool participation for poor and nonpoor three- and four-year-old children. The GAO concluded that 22 percent of three-year-old children and 49 percent of four-year-old children from poor families had participated in preschool. The percentages were higher (33 percent and 57 percent, respectively) for children from nonpoor families.

The NEIS data set tells us that in each year of program operations over 90 percent of Even Start children participated in early childhood education, and so it is clear that regardless of the basis of comparison, Even Start has increased participation in early childhood education programs.

To summarize, Even Start has achieved its goal of increasing participation in its three core service areas, from somewhere in the 30 to 40 percent range to over 90 percent for adult education, from about eight percent to over 90 percent for parenting education, and from 40-60 percent to over 90 percent for early childhood education.

Project-Level Variation in Participation Rates

Participation rates are not uniform across Even Start projects. And, in fact, the cohort-level averages presented above mask much greater project-to-project variation. Exhibit 6.5 is a distribution of project-level participation rates in all three core services. The shape of the distribution shows that many projects are able to engage a large percentage of their families in all three core services: 90 percent or more of the families participated in all core services for 32 percent of the projects. It also shows that all families participated in each core service in 7 percent of the projects, while less than 60 percent of the families participated in each core service area in 35 percent of the projects. Most of the projects in this latter group belong to Cohorts 3 and 4; only 6 percent of the projects in Cohorts 1 and 2 had less than 60 percent of their families in all three core services.

Exhibits 6.6, 6.7 and 6.8 are distributions of project-level participation rates for each of the three core service areas. The distributions look roughly similar in shape, and are essentially bi-modal. That is, one group of projects serves a relatively low percentage of families (less than 60 percent) in each core service area, and another group serves 90 percent or more of their families.

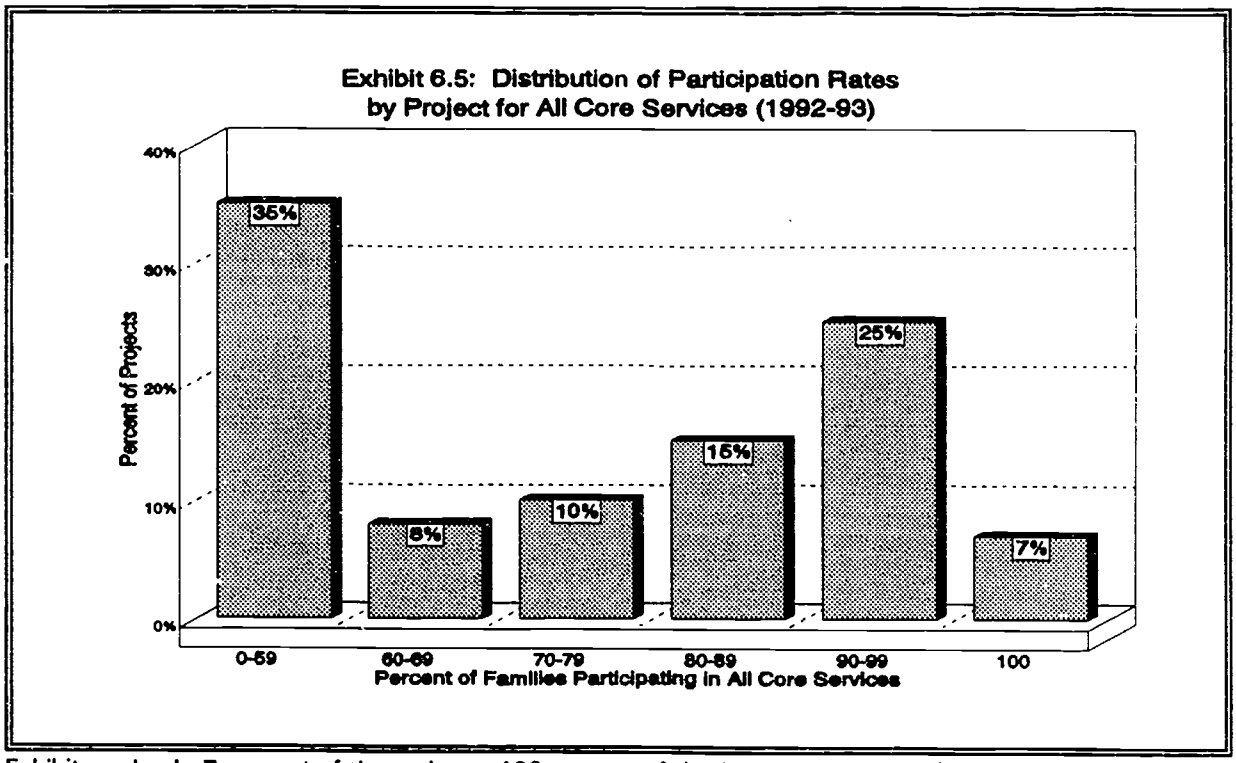


Exhibit reads: In 7 percent of the projects, 100 percent of the families participated in all three core services.
Note: Based on reports from 265 of 340 projects.

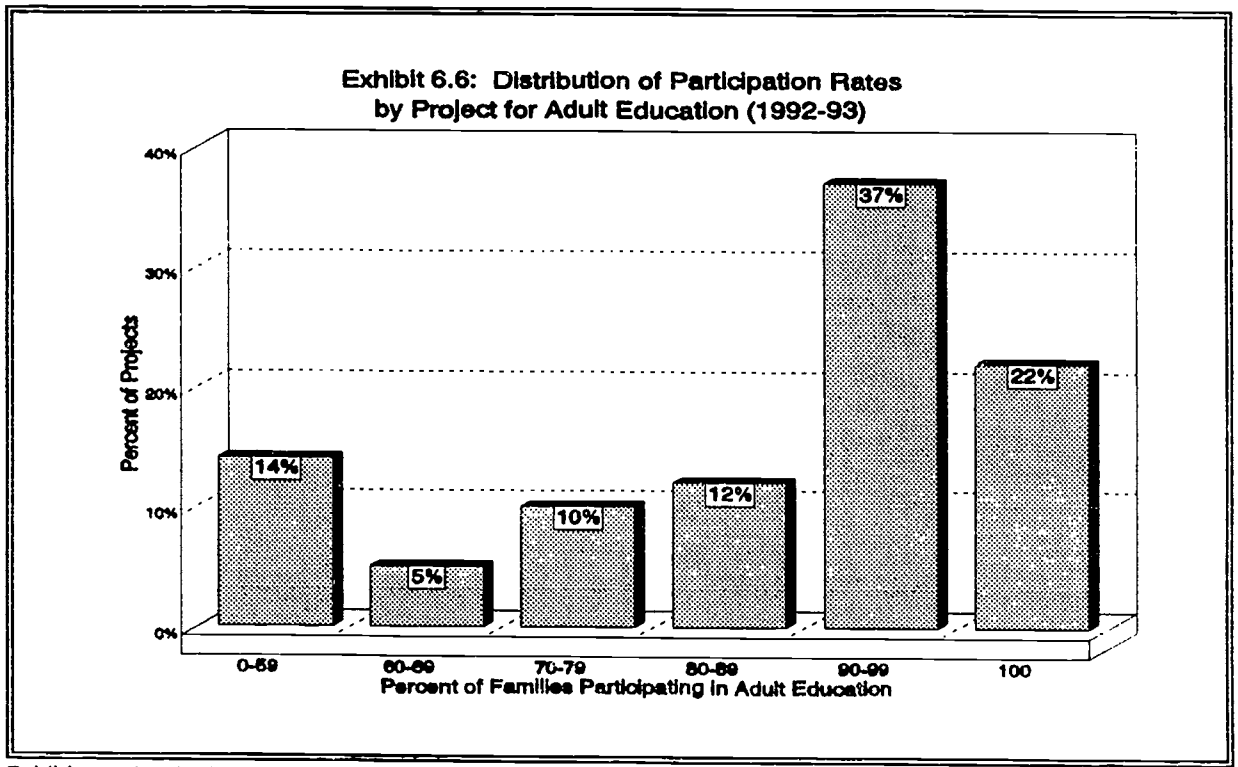


Exhibit reads: In 22 percent of the projects, 100 percent of the families participated in adult education.
Note: Based on reports from 272 of 340 projects.

Multi-Year Participation

Although Even Start projects are funded for four years, few families take part for that amount of time. This fits with reports from project directors who, in the early years of the evaluation, identified the recruitment, retention, and motivation of families as the most common barrier to effective program implementation.

Fifty-three percent of the families that began Even Start in Cohort 1 projects during the 1989-90 year participated only in that first year, 24 percent participated in both the first and second program years, 13 percent participated in three years, and 10 percent participated in all four years of the grant (Exhibit 6.9). A similar pattern is emerging for Cohort 1 families who started their participation in Even Start during 1990-91 and 1991-92. On the other hand, Cohort 2 projects appear to be more successful at retaining families across years. Of all Cohort 2 families that began Even Start in 1990-91, 27 percent participated for one year, 42 percent continued into a second year, and 31 percent participated in three years.

These percentages are informative, but they are limited in that they only identify a family as having participated or not in a given year. They tell us nothing about the amount of participation during that year. A more detailed look at length of participation is given by Exhibit 6.10 which draws on monthly contact log data from Cohorts 1 and 2 to show the number of months of participation over a 24-month period. The months of service do not have to be consecutive, so that a family who participates in core services during October, skips November and December, and participates again in January would have two months of participation.

The exhibit shows that 25 percent of the families received some core services in three or fewer out of the total possible 24 months, 50 percent of the families participated in seven or fewer months, 69 percent participated in 12 or fewer months, and about four-fifths (79 percent) participated in 24 or fewer months. Conversely, 31 percent participated in more than 12 months.

Reasons for Exiting from Even Start

There are many reasons for turnover of families in Even Start (see Exhibit 6.11). Some of these are positive, e.g., a parent found a job and moved out of the project's catchment area, and some are negative, e.g., the family lost interest or the program didn't meet their needs. A reason for leaving was reported for 70 percent of the families that left the program, a substantially higher percentage of families than was observed in the national evaluation of adult education programs, where program staff were able to list a reason for exiting for only 38 percent of the families that left the program (Development Associates, 1993). Families that exited the program for unknown reasons may be different in important ways from families that exited for a known reason. For example,

Exhibit 6.9

Years of Participation by Cohort and Year of Intake

Cohort	Intake Year	One Year		Two Years		Three Years		Four Years		Total
		N	%	N	%	N	%	N	%	
Cohort 1	1989-90	1,315	53%	586	24%	329	13%	231	10%	2,461
	1990-91	2,001	55%	1,009	27%	650	18%			3,660
	1991-92	1,858	55%	1,525	45%					3,383
Cohort 2	1990-91	520	27%	807	42%	611	31%			1,938
	1991-92	1,377	53%	1,221	47%					2,598

Exhibit reads: Among families entering Even Start at a Cohort 1 site during 1989-90, 53 percent participated only in that program year while 24 percent also participated during 1990-91, 13 percent participated in 1991-92, and 10 percent participated in all four program years.
Note: Based on reports from 120 of 340 projects.

Exhibit 6.10: Number of Months in Which Even Start Families Participated in Core Services

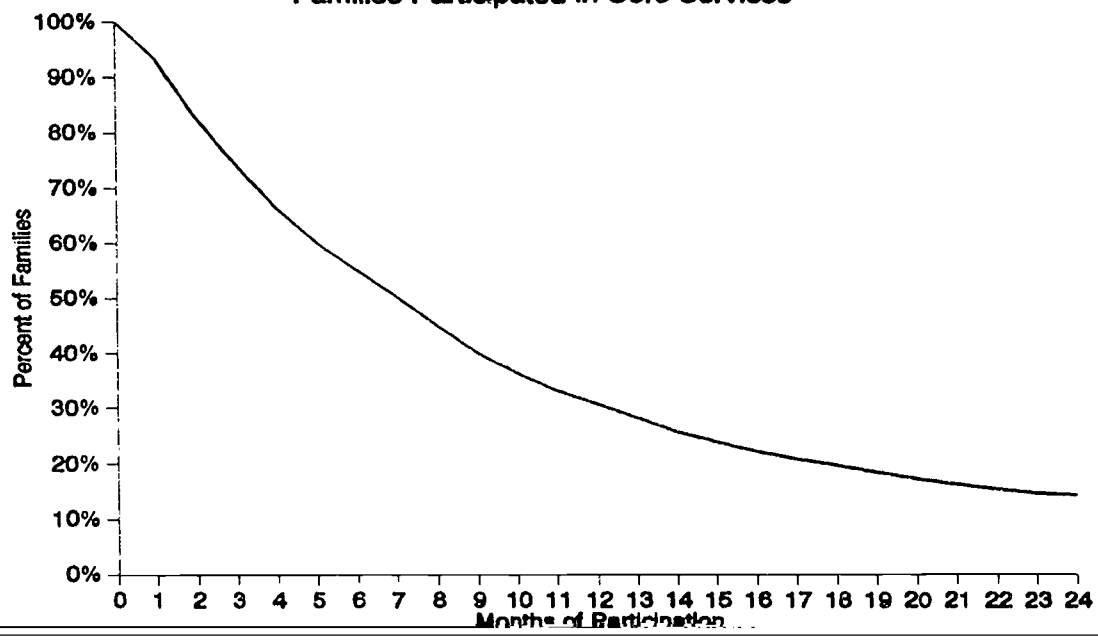


Exhibit 6.11

Reasons for Leaving Even Start (1992-93 Program Year)

Reason for Leaving	N	Percentage of Families Giving A Reason
No reason given	5,015	---
Reason given	11,532	---
Completed planned educational program or met personal objectives	2,756	24%
Moved from area or changed programs	2,779	24%
Lack of interest, refused to participate	1,553	13%
Family crisis	1,387	12%
Not eligible based on local or national criteria	1,177	10%
Conflicts, barriers to participation	595	5%
Service unavailable or project closed	295	3%
Other	1,010	9%

Exhibit reads: 24 percent of the families which left Even Start did so because they successfully completed their planned educational program.
Note: Based on reports from 272 of 340 projects.

families which leave for unknown reasons may be more likely to move, to be dissatisfied with the project, or to be difficult-to-reach families than families that leave for a specific reason.

Based on families where there was a reason for leaving, completion of the planned educational program or meeting personal objectives was listed for 24 percent of families that exited Even Start. This includes families where all members completed their educational program as well as families where parents obtained their GED or a full-time job, at which time the entire family exited the program.

Moving out of Even Start's catchment area or changing programs was an equally common reason for leaving the program, listed for 24 percent of families. This large percentage of movers raises the issue of whether project directors are aware of and are using their option to continue serving families that have moved but are close enough to continue participation (i.e., moved to another catchment area in the same school district).

Thirteen percent of the families left Even Start because of a general lack of interest in the program and a subsequent refusal to participate. Another 12 percent had a family crisis of one sort or another that prevented them from participating. Ten percent left the program because they became ineligible due to a change in the family situation, i.e., there was no longer an eligible child or adult in the family. This could be due to federal or local eligibility requirements. Five percent gave a variety of reasons which suggested personal or structural conflicts or barriers to continued participation, such as: medical reasons, work conflicts, pregnancy, scheduling conflicts, child care problems, and a lack of transportation. Finally, three percent were in projects that closed or left because a key service was unavailable.

Amount of Core Services Received

The contact logs compiled by Even Start staff from projects in Cohorts 1 and 2 record the amount of time families spent in each core service area on a monthly basis. The mean amount of service for each core service area is substantially higher than the median, indicating that some families receive very large amounts of service, while many more received relatively small amounts of service. We present both medians and means in the following discussion.

Even Start staff recorded contact hours for one adult and one child in each family. Thus, the participation data described below represents a lower-bounds estimate of service hours for families where multiple child or multiple adults participated in Even Start core services.

Total Hours of Service Received

Exhibit 6.12 shows the amount of service received by families who entered Even Start in 1990-91. The average family in that cohort participated in 107 hours of adult education (median of 41), 58 hours of parenting education (median of 29), and 232 hours of early childhood education (median of 102). Although not shown in a table, the average amount of service received by families in the five In-Depth Study projects is close to the overall figures cited above: 123 hours of adult education (median of 63), 48 hours of parenting education (median of 34), and 266 hours of early childhood education (median of 162).

There is great variation in the total amount of core services received by Even Start families. Exhibit 6.13 is a distribution of total hours of adult education. It shows that more than half of the adults who participated in Even Start received less than 50 hours of adult education, 15 percent received between 50 and 99 hours, 8 percent received between 100 and 149 hours, and so on. Small percentages of families received very large amounts of adult education, (e.g., 10 percent received 300 or more hours).

Exhibit 6.12

Measures of Amount of Core Services for 1990-91 Cohort

Core Service	Percentile			Mean	SD
	25%	50% (Median)	75%		
Total hours served					
Adult education	14	41	124	107.1	169.4
Parenting education	11	29	67	57.8	93.2
Early childhood education	21	102	330	232.3	305.0
Total months served					
Adult education	3	5	12	7.8	6.6
Parenting education	3	6	12	8.3	6.8
Early childhood education	3	6	12	8.1	6.5
Average hours per month					
Adult education	4	9	18	13.5	13.9
Parenting education	2	4	8	6.5	7.4
Early childhood education	5	16	39	26.0	26.7

Exhibit reads: Even Start adults participated in an average of 107.1 total hours of adult education. The median adult participated in 41 hours.
Note: Based on reports from 120 of 340 projects.

A similar pattern can be seen for parenting education (Exhibit 6.14) and for early childhood education (Exhibit 6.15). Sixty-six percent of Even Start families received less families received less than 50 total hours, 11 percent received between 50 and 99 hours, and the remaining 51 percent received more than 100 total hours, ranging up to 600 or more hours of instruction.

Additional analysis of contact log data for adult education shows that the average number of instructional hours increased steadily over three years of measurement, from 68 hours in 1990-91 to 91 hours in 1991-92, and again to 107 hours in 1992-93 (Exhibit 6.16). This pattern of increasing amounts of instruction over time holds for each instructional area within adult education. It appears that as Even Start projects mature, the amount of participation on the part of adults increases, either as a function of better attendance or increased retention.

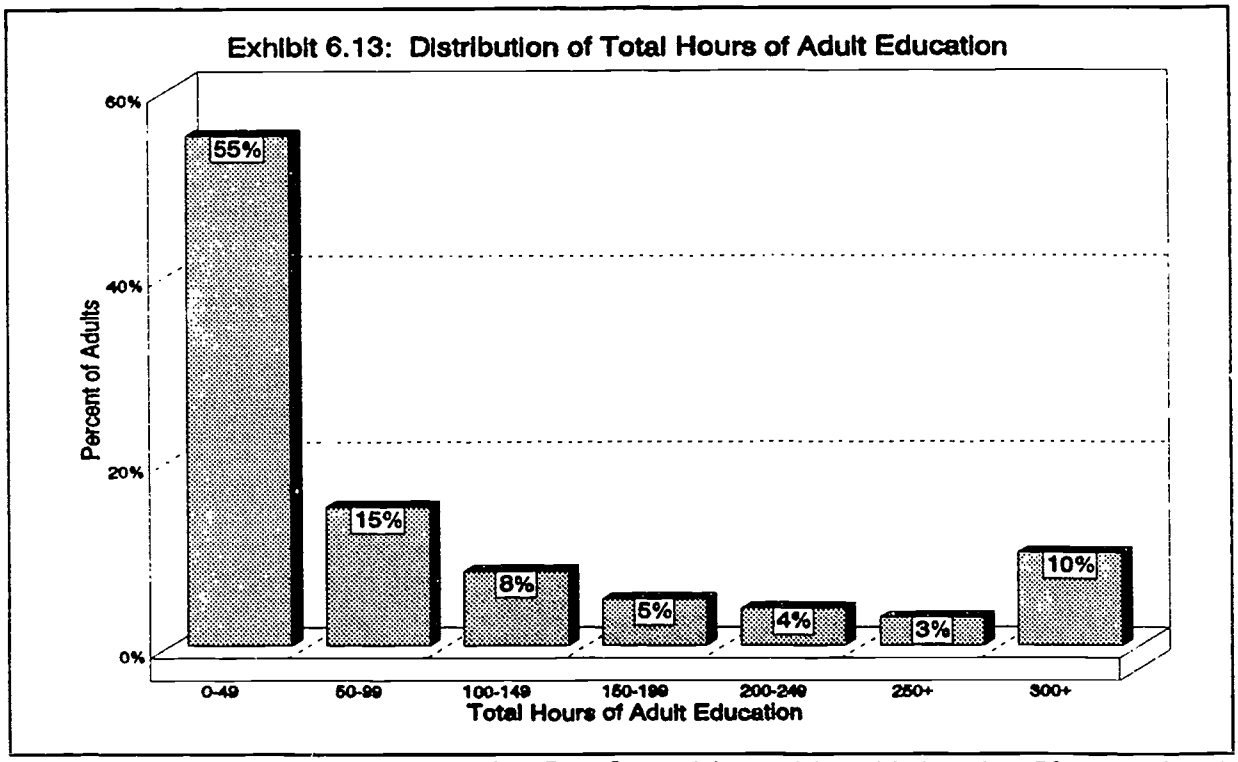


Exhibit reads: More than half (55 percent) of Even Start adults participated in less than 50 hours of adult education.
Note: Based on reports from 120 of 340 projects.

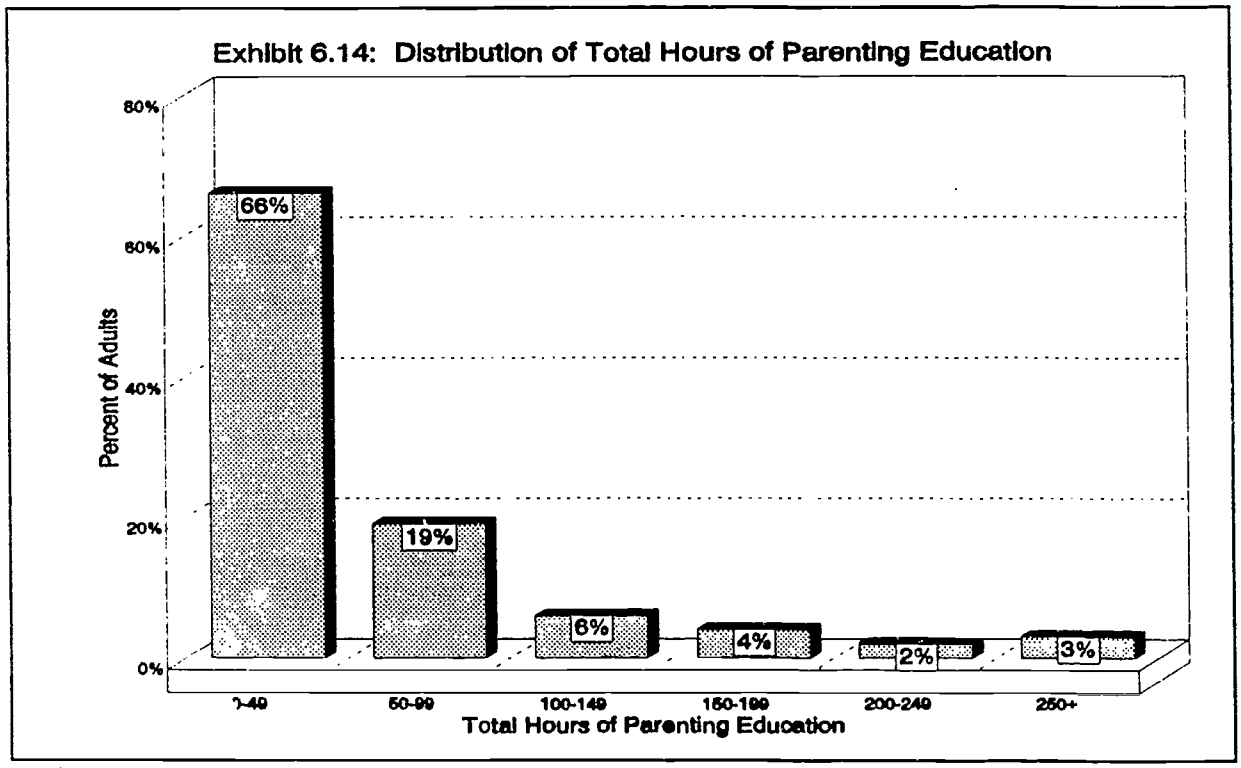


Exhibit reads: Two-thirds of Even Start adults participated in parenting education less than 50 hours.
Note: Based on reports from 120 of 340 projects.

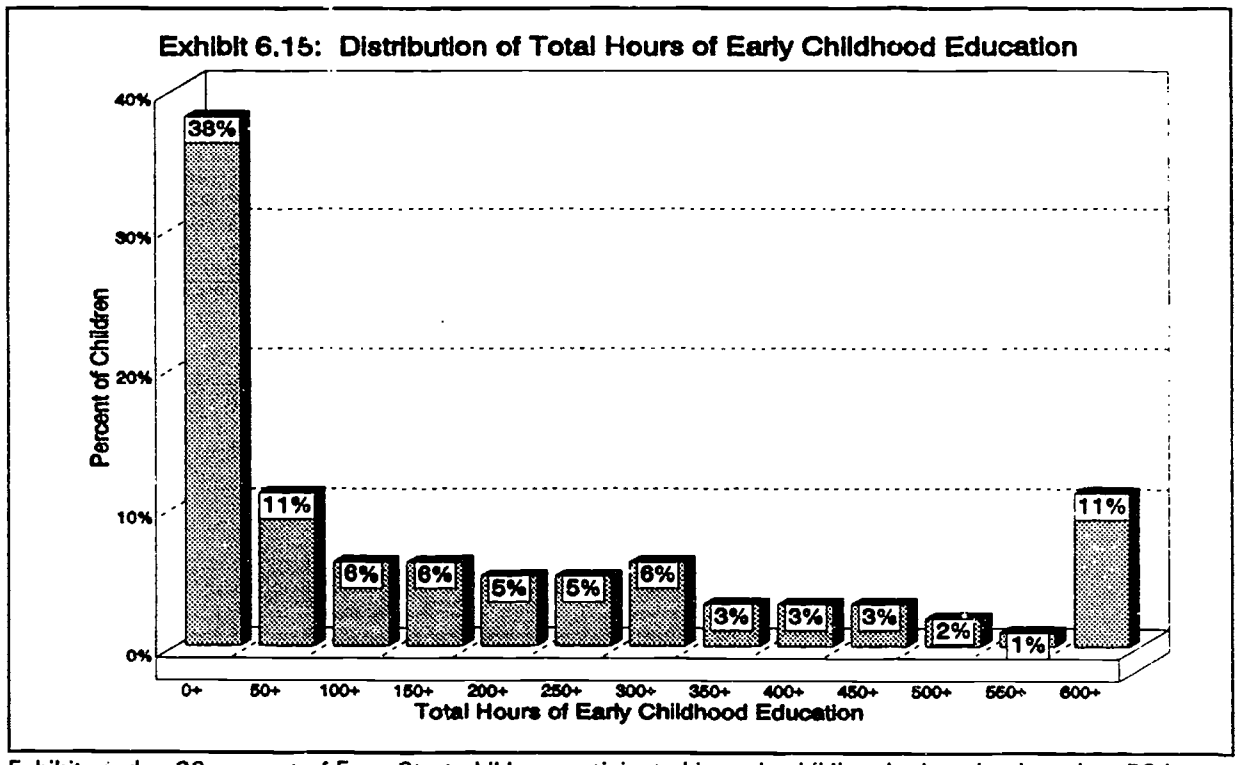


Exhibit reads: 38 percent of Even Start children participated in early childhood education less than 50 hours.
Note: Based on reports from 120 of 340 projects.

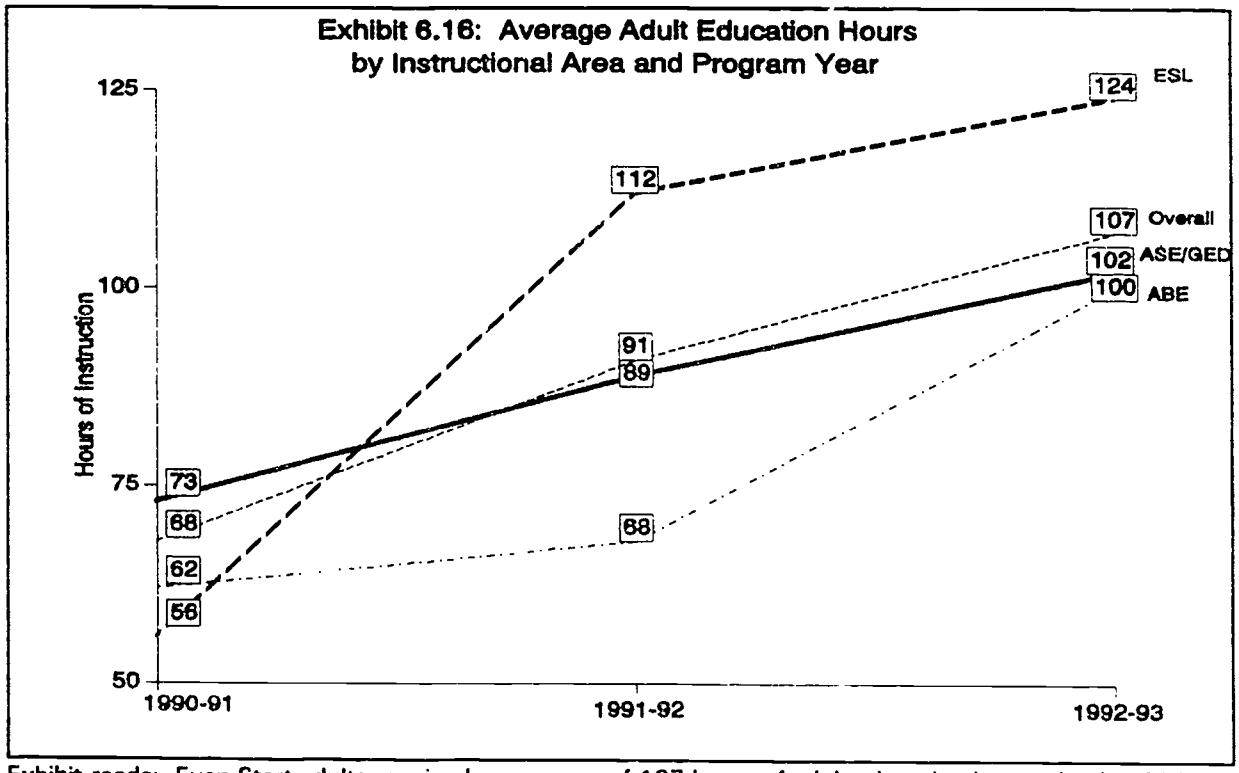


Exhibit reads: Even Start adults received an average of 107 hours of adult education instruction in 1992-93.
Note: Based on reports from 120 of 340 projects.

To put these findings in perspective, Exhibit 6.17 contrasts the average number of hours spent by Even Start adults participating in different types of adult education with the amount of time spent by adults in adult education programs across the country as measured by the national evaluation of adult education programs (Development Associates, 1993). Across all three years of Even Start data collection, Even Start participants received more instruction, on average, than participants in regular adult education programs (93 hours vs. 80 hours). When broken down by instructional area, the Even Start vs. regular adult education difference is negligible for adult basic education and English-as-a-second-language programs, but is quite large for adult secondary education/GED preparation programs (average of 91 hours vs. 63 hours).

Exhibit 6.17

Average Adult Education Hours by Instructional Area, Even Start and Other Adult Education Programs

Instructional Area	Even Start (Average Hours)[a]	Other Adult Education Programs (Average Hours)[b]
Adult basic education	79	74
Adult secondary education/GED preparation	91	63
English-as-a-second language	109	107
Total	**93**	**80**

Exhibit reads: Even Start adults received an average of 93 hours of adult education.
[a]Represents average of data from 1990-91, 1991-92, and 1992-93.
[b]From National Evaluation of Adult Education Programs, Development Associates (1993), p.60.

The differences favoring Even Start are much larger if we assume that the national adult education evaluation is measuring mature adult education programs, and that mature Even Start projects would provide instruction at levels similar to the most recent year of data collection (1992-93) shown in Exhibit 6.16. The 1992-93 data show that, across all instructional areas, Even Start participants received 34 percent more adult education instruction than do participants in regular adult education programs: 62 percent more for adult secondary education/GED preparation, 35 percent more for adult basic education, and 16 percent more for English as a second language.

the typical Even Start family received 9 hours of adult education (mean of 13.5 hours), 4 hours of parenting education (mean of 6.5 hours), and 16 hours of early childhood education (mean of 26 hours) per month (Exhibit 6.12). This could equate to a once-a-week adult education class for two hours per week and a once-a-week parenting education visit or class for one hour per week.

As was the case for total hours of core services, there is great project-to-project variation in the average monthly hours of each core service. Exhibits 6.18, 6.19, and 6.20 show project-level distributions of the average hours per month of service for adult education, parenting education, and early childhood education. Eighty-five percent of the projects provide an average of fewer than 19 hours per month of adult education, with small numbers of projects providing higher amounts (Exhibit 6.18). The same pattern is seen for parenting education--94 percent of the projects provide an average of 14 or fewer hours of parenting education per month (Exhibit 6.19). There is even greater variation in the amount of early childhood education services received, and the distribution of average amount of service received (Exhibit 6.20) is fairly flat, except that 18 percent of the projects provide an average of 45 or more hours of early childhood education per month.

Amount of Early Childhood Education. The amount of early childhood education service is related to the age of the child being served (Exhibit 6.21). The typical Even Start child who is less than one year of age received 6.3 hours per month of early childhood education (mean of 15.5 hours). This amount stays roughly constant for one-year-olds, and then increases to 10.6 hours per month (mean of 20.0) for two-year-olds, 20.3 hours (mean of 29.2) for three-year-olds, and 29.6 hours (mean of 35.5) for four-year-olds. The pattern breaks for five-year-old children, who receive fewer hours of early childhood education services through Even Start (median of 12.0 hours per month, mean of 25.2) because they are entering the public schools and this evaluation does not count hours

Exhibit 6.18: Project Level Distribution of Average Hours Per Month of Instruction for Adult Education

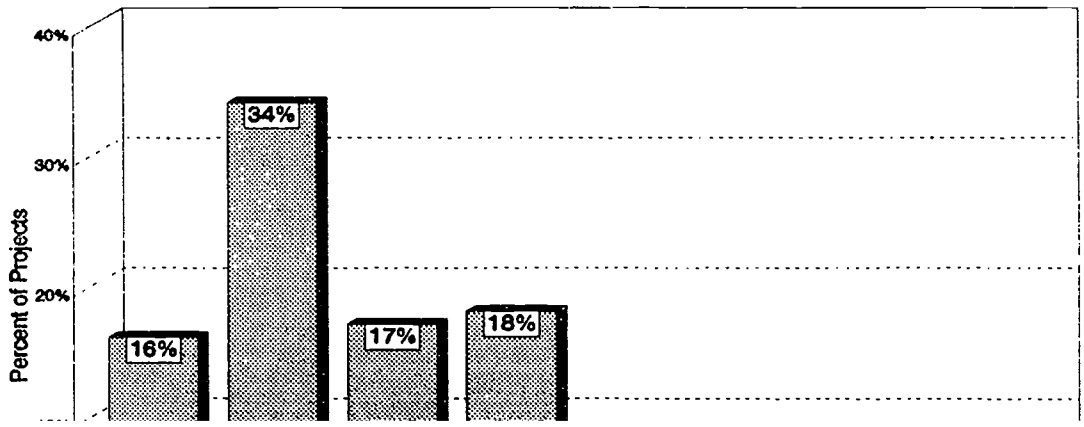


Exhibit 6.23: Percent of Projects Using Different Amounts of Home-Based Service, by Core Service Area

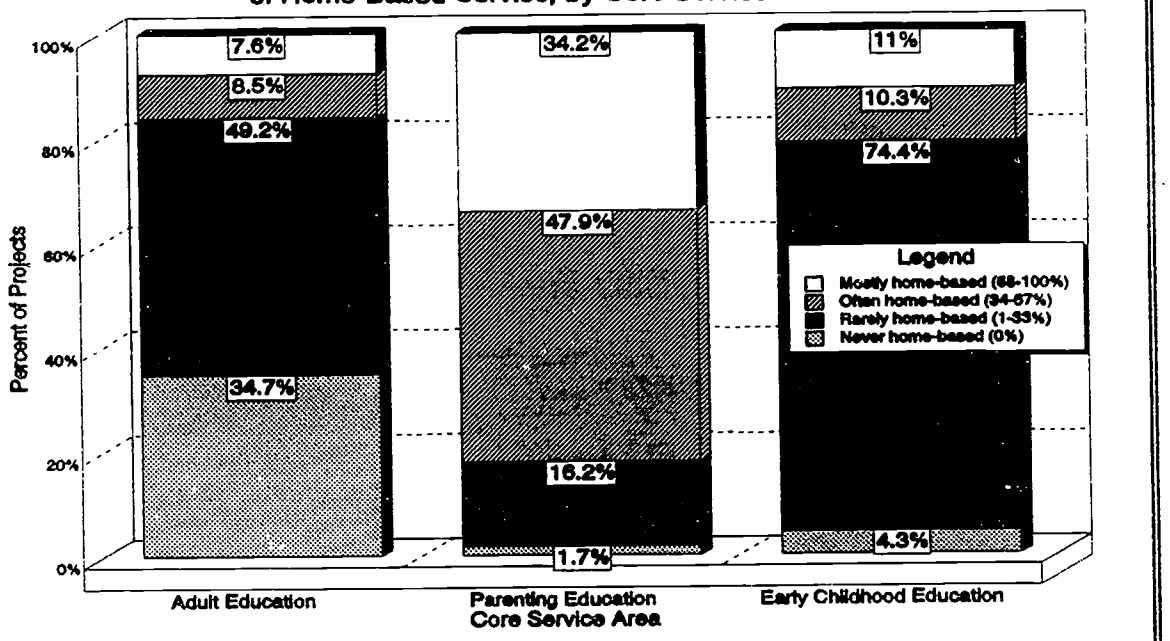


Exhibit reads: 34.2 percent of the projects provided over two-thirds of parenting education services to adults and children together.
Note: Based on reports from 120 of 340 projects.

Effect of Home-Based Services on Retention and Service Amount

Home-based services are an important part of Even Start projects, and the preceding discussion showed that there is substantial variation in the extent to which projects rely on this service delivery mode. Home-based services are seen as important in their own right--as being a useful way of delivering services directly to families. In addition, when Even Start staff travel to a family's home there is hope that the family will feel that Even Start staff value them, that family members will learn to trust Even Start staff and, in the long run, that family members will be willing to participate more fully in Even Start activities.

Data from the NEIS show that there is a strong positive relationship between amount of home-based service and retention/participation in Even Start. Retention rates, defined as the percent of families participating in Even Start for six or more months, are substantially higher in projects that provide services primarily in the home than in projects that provide fewer home-based services (Exhibit 6.24). Program retention goes up from about 40 percent in projects that provide no home-based services to about 70 percent in projects which provide 68 percent or more of their services in the home. This relationship exists for all three core service areas.

Exhibit 6.24: Percent of Even Start Families Participating for Six or More Months by Percent of Home-based Services and Core Service Area

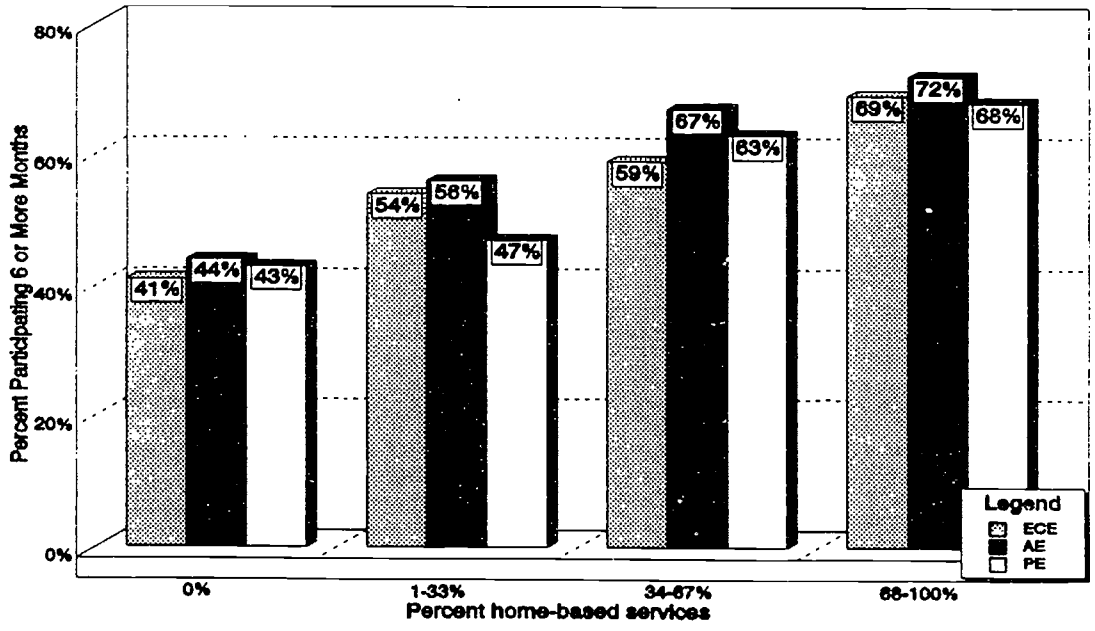


Exhibit reads: 69 percent of children in mostly home-based projects participated in early childhood education for 6 or more months.
Note: Based on reports from 120 of 340 projects.

At the same time that retention is improved, service intensity is decreased in projects that emphasize home-based instruction. Exhibit 6.25 shows that the average hours of instruction per month received by participating families decreases in each core service area as the amount of home-based instruction increases. For example, children in projects which provide 33 percent or less home-based early childhood education participate for about 27 or 28 hours a month, while children in projects which provide more than 33 percent home-based early childhood instruction participate for five to ten hours a month. This finding makes sense in that it is relatively easy to have high numbers of hours in a center-based early childhood education program where children participate as a group, while a home-based program which includes one-on-one instruction rarely will be able to provide more than one or two hours per week. The same holds for adult education and parenting education programs.

Exhibit 6.25: Average Hours of Services Received per Month by Percent of Home-Based Services and Core Service Area

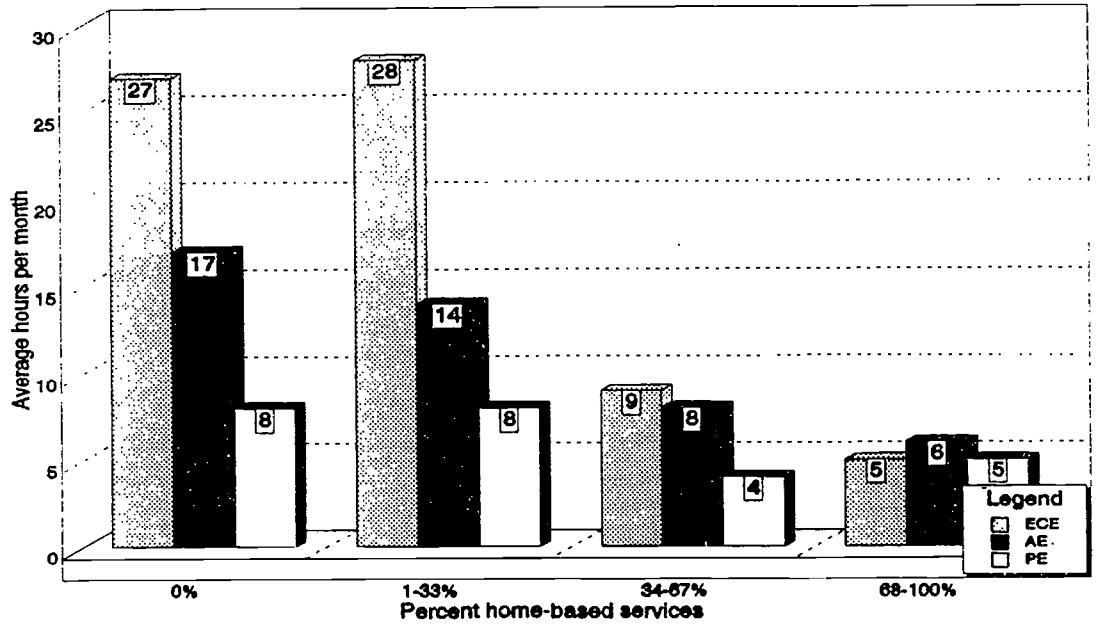


Exhibit reads: Children in projects which provide mostly home-based early childhood education received an average of five hours per month of early childhood education.
Note: Based on reports from 120 of 340 projects.

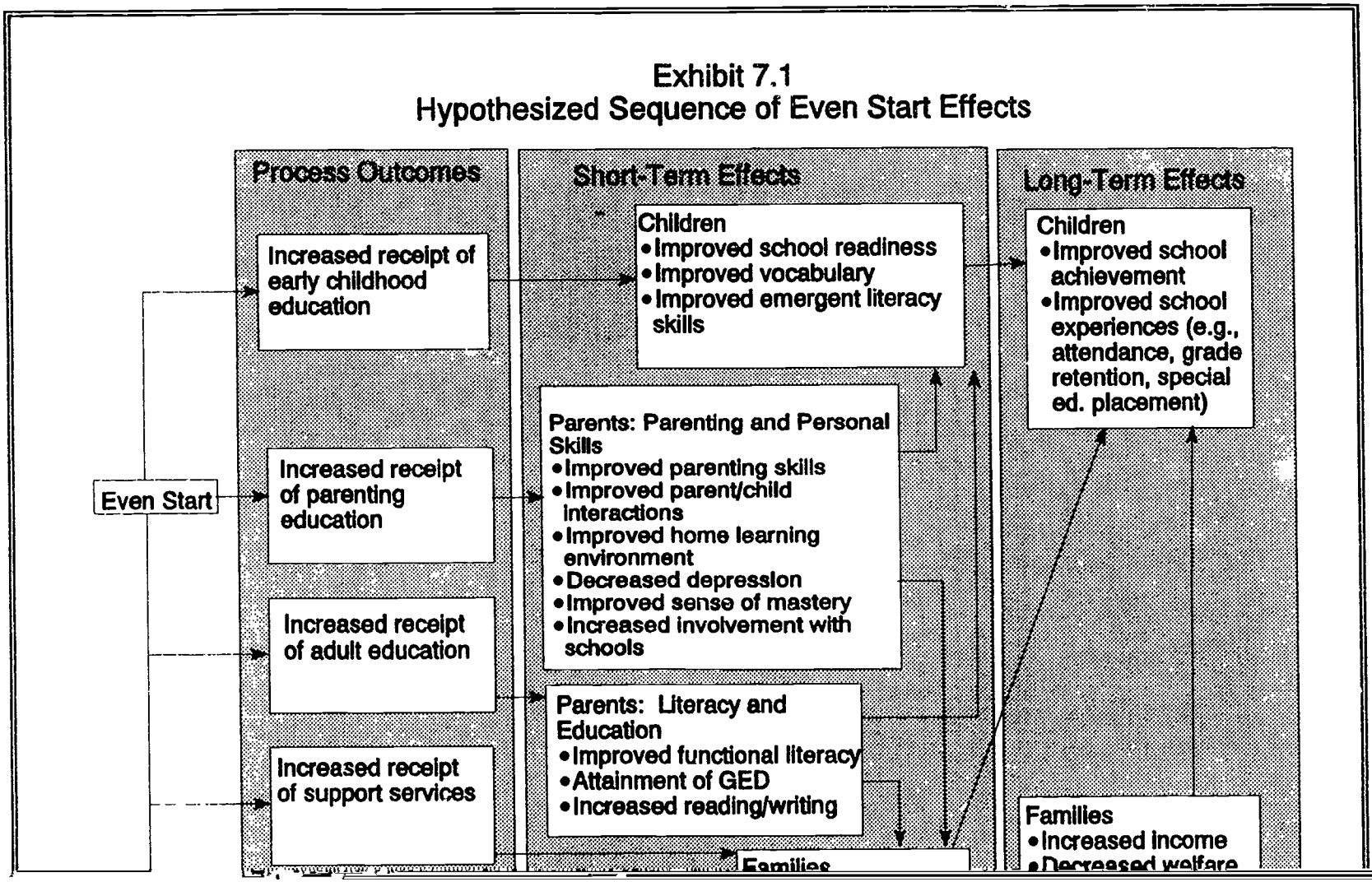


Exhibit 7.1
Hypothesized Sequence of Even Start Effects
Process Outcomes
Short-Term Effects
Long-Term Effects
Even Start
Increased receipt of early childhood education
Increased receipt of parenting education
Increased receipt of adult education
Increased receipt of support services
Children
•Improved school readiness
•Improved vocabulary
•Improved emergent literacy skills
Parents: Parenting and Personal Skills
•Improved parenting skills
•Improved parent/child interactions
•Improved home learning environment
•Decreased depression
•Improved sense of mastery
•Increased involvement with schools
Parents: Literacy and Education
•Improved functional literacy
•Attainment of GED
•Increased reading/writing
Children
•Improved school achievement
•Improved school experiences (e.g., attendance, grade retention, special ed. placement)
Families
•Increased income

Exhibit 7.2

Demographic Characteristics at Pretest of Families in Random Assignment Sites of the In-Depth Study

Demographic Characteristics	Percentage of Families	
	Even Start (n=101)	Control (n=98)
Family Configuration		
Single Parent	40%	39%
Couple	41%	46%
Extended family	17%	13%
Other	1%	1%
Education Level		
Parent has high school diploma, GED, or higher	27%	19%
Spouse/partner has high school diploma, GED, or higher	47%	39%
Employment Status		
Parent not working	83%	82%
Parent working part-time	5%	7%
Parent working full-time	12%	11%
Spouse/partner not working	27%	14%
Spouse/partner working part-time	6%	7%
Spouse/partner working full-time	67%	79%
Primary Source of Income		
Government assistance	53%	44%
Job wages	42%	51%
Alimony and child support	2%	1%
Other	3%	4%
Annual Income		
Less than $5,000	52%	44%
5,000 - 9,999	21%	30%
10,000 - 14,999	13%	9%
15,000 - 19,999	7%	10%
20,000 - 24,999	3%	6%
25,000 or more	4%	1%

the pretest-posttest gains among the control group from the gains among the Even Start group and dividing by the standard deviation of the control group pretest scores.

In addition to the In-Depth Study, the NEIS provides great amounts of pretest-posttest data on about 120 Even Start projects, and these data are used to provide information about pretest-posttest gains for Even Start participants. The approach used here is measure-specific. For some measures we have developed our own Even Start "norms," for others we use external standards of comparison such as the norms that publishers provide for standardized tests, the scores attained by similar populations in other recently completed evaluations, or the scores or program participants prior to receiving program services. While these approaches are second-best to a randomized experiment, the combination of the two provides for a strong assessment of the short-term effects of Even Start.

It is important to recognize that findings from the In-Depth Study are based on a longitudinal study of a fixed group of families. These families were randomly assigned to Even Start or a control group in the fall of 1991 and were pretested. They were then tested twice more, at nine months and at 18 months after the pretest. All families participating in the evaluation were assessed at each measurement point, regardless of whether they were participating in Even Start. This longitudinal assessment provides an unbiased, and conservative, estimate of the impacts of Even Start.

In contrast, data from the NEIS were collected under a very different design, which allows answers to different questions. Data for the NEIS were collected on program families only, at entry to Even Start, and at the end of each school year or at exit from the program (if the family left the program). No measures were made of any families after they exited from Even Start. Thus, the NEIS data are restricted to the subset of families who remained in the program between pretesting and posttesting. Any family that did not participate long enough to be posttested had to be omitted from the analysis. Since we expect length of participation to be related to positive program effects, we also expect families measured in the NEIS to show larger gains than program families measured in the In-Depth Study. Thus, findings from the NEIS can be generalized only to the population of families that remain in the program for several months (long enough to be posttested), while findings from the In-Depth Study can be generalized to all Even Start families in the selected projects, including those that dropped out early.

In this report we try to reconcile the findings from these two data sets. This is easy when the two data sets point to the same conclusion, but it is more difficult when one data set points to a positive effect while the other data set shows that Even Start makes no difference. What should be remembered is that differences in the design of the two data sets mean that they are not necessarily equally appropriate for answering the same questions.

A listing of the outcome measures used in the In-Depth Study portion of the evaluation and in the NEIS is contained in Exhibit 7.3. Outcome measures on the NEIS were collected only in Cohort 1 and 2 projects.

Exhibit 7.3

Outcome Measures Used in In-Depth Study and NEIS

Outcome Measure	IDS	NEIS
Children		
PreSchool Inventory	x	x
Peabody Picture Vocabulary Test	x	x
Child's Emergent Literacy Test	x	--
Parents: Literacy levels		
Comprehensive Adult Student Assess. System	x	x
Attainment of a GED	x	x
Reading/writing activities at home	x	
Parents: Parenting and personal skills		
Personal skills		
Depression scale	x	--
Mastery scale	x	--
Home learning environment		
Talking with child	x	x
Play materials in home	x	x
Number of children's books in home	x	x
Reading to child	x	x
Reading materials in home	x	x
Learning activities at home	x	x
Teaching child	x	x
Family rules	x	--
Activities with child	x	--
Parent as a Teacher	x	x
Parent/child reading task	x	--
Parents' expectations and involvement		
Expectations for school success	x	x
Expectations for high school grad.	x	x
Families		
Social support scale	x	--
Family resources		
Source of income	x	--
Income level	x	--
Adequacy of resources	x	--
Employment status	x	x

Exhibit 8.1

PSI Pretest Scores
(Raw Scores from the NEIS Data Set)

Group	N	Mean	SD
Age at pretest			
3-0 to 3-11	963	10.0	5.8
4-0 to 4-11	1,413	14.4	6.5
5-0 to 5-11	347	18.9	7.0
Gender			
Male	1,317	13.4	7.2
Female	1,359	14.0	7.2
Ethnic background			
Asian	37	12.4	8.1
African-American	897	13.4	7.1
Hispanic	729	12.0	7.6
Native American	75	13.7	6.8
White	992	15.2	6.7
Prior preschool experience			
No	1,948	12.7	6.9
Yes	697	16.4	7.3
Highest grade attained by target parent			
Grade 0-4	74	11.5	9.0
Grade 5-8	482	12.9	7.2
Grade 9-12	1,619	13.8	7.1
Diploma or GED	504	14.9	7.2
Language of test administration			
English	2,296	14.3	7.0
Spanish	357	11.4	7.7
Total	**2,723**	**13.4**	**7.0**

Exhibit reads: The average PSI pretest score for males was 13.4 points.

Developing Age Norms for the PSI

One way to measure the effect of Even Start on the PSI is to compare pretest-posttest changes observed for children in families assigned to Even Start with changes observed for children in families assigned to the control group in the In-Depth Study projects. Because families were randomly assigned to the two groups, this approach will yield an unbiased estimate of the effect of Even Start in these sites. But, the In-Depth Study relies on data from only five sites, with a total of about 100 families in Even Start and 100 control families.

We would like to use data from the NEIS to augment the conclusions that can be drawn from the In-Depth Study. The problem is that the NEIS only collects data from Even Start families--no control families are measured. If the PSI had national norms, we could estimate the amount of growth expected on the PSI by comparing the pretest-posttest growth of Even Start children with the growth of children nationally. But, no such norms exist for the PSI, and, even if they did, they probably would not be based on a sample of children that adequately represents the Even Start population.

Fortunately, the pretest data collected for this evaluation afforded the opportunity to develop age norms for the PSI based on data collected on Even Start children. By definition, the resulting norms are directly applicable to the Even Start population. In brief, the methodology called for administering the PSI to children three to five years old as they entered Even Start and using these pretest scores to generate a growth curve which represents the no-treatment expectation for the Even Start population. Additional information on this approach is contained in St.Pierre et al., (1993) and Murray et al., (1993), and is reproduced in the technical appendix to this report. To the extent that children entering Even Start have had prior preschool experience, their pretest scores reflect learning obtained through that experience.

The results of the norms development effort are summarized in Exhibit 8.2 which shows that children in the Even Start population are expected to gain an average of .40 items per month on the PSI, solely on the basis of normal development. Children who are administered the PSI in Spanish are expected to gain an average of .29 items per month. Gains are expressed in terms of number of items per month because children participate in Even Start for different lengths of time (different numbers of months). We use these no-treatment expectations in subsequent analyses to determine whether participation in Even Start produced pretest-posttest changes which are greater than what would be expected on the basis of normal development.

Effects on the PSI

Data from the national survey of all Even Start programs (the NEIS) indicate that Even Start has a statistically significant, positive effect on the PSI--an effect commensurate in size with effects on the PSI that have been observed in other evaluations of high-quality preschool programs. During the first year of the random assignment In-Depth Study, Even Start children gained at a significantly greater rate than control group children. However,

Exhibit 8.2

Developmental Growth on the PSI in the Absence of Even Start Instruction (Based on the NEIS Data Set)

Group	Number of Children	Expected Growth in Items/Month	95% Confidence Band
No prior preschool experience	1,481	.40	.36-.44
Prior preschool experience	466	.37	.33-.42
Administered in Spanish	366	.29	.24-.34

Exhibit reads: Without preschool experience, including Even Start, a child would be expected to gain .40 raw score points per month on the PSI.

Note: Developmental growth is estimated from cross-sectional pretest scores. It is defined as the slope of the regression line predicting pretest scores from age in months. The 95 percent confidence band is obtained by adding and subtracting 1.96 standard errors from the expected growth.

once control group children entered Head Start or kindergarten, they gained at the same rate as Even Start children.

Effects as Measured by the In-Depth Study. Data from the In-Depth Study show that children in families assigned to participate in Even Start gained an average of 10.2 points from pretest to the second posttest (about an eighteen-month period) compared to an average gain of 9.3 points for children in families assigned to the control group (Exhibit 8.3). Both the Even Start and the control group gained a statistically significant amount on the PSI since the pretest. However, the gain for the Even Start children is not significantly greater than the gain for the control children.

These results differ from those seen at the first posttest, where Even Start children gained significantly more than control children. Looking at the scores from Even Start and the control group at the three data collection points (Exhibit 8.4), we see that Even Start children demonstrated rapid growth between the pretest and first posttest, with a steeper slope than the control group. Even Start children continued on this growth trajectory between the first and second posttests, but control group children gained at a faster rate than they had between the pretest and first posttest, and partially closed the gap between them and the Even Start group.

One likely explanation for these results is that children in the control group are more likely to be enrolled in early childhood education as they get older. Another is that children in Even Start at the pretest may drop out or end participation before the second posttest. Exhibit 8.5 shows the percentage of Even Start and control children who were enrolled in an early childhood education program at the pretest and both posttests. At the pretest, about half of the Even Start parents reported that their children were enrolled in an early childhood program, compared with 23 percent of the control group. The greater percentage among Even Start children is most likely due to the fact that the pretest interview could have been administered up to a month after Even Start program participation began. At the first posttest, the proportion of Even Start children reported by parents to be in early childhood education was double that of the control group (67 percent versus 33 percent). It was at this time point that a significant difference between the groups was seen in the PSI.

Exhibit 8.5: Participation in Early Childhood Education Among Children in Even Start and the Control Group

These findings provide evidence that (1) the majority of children in the control group entered an early childhood program by the second posttest, and (2) about half of the children in the Even Start group were no longer in the program after the first posttest. Therefore, it is not surprising that the significant program effects on the PSI which were observed at the first posttest disappear at the second posttest.

Effects as Measured by the NEIS. Data from the NEIS were analyzed differently than data from the In-Depth Study. Across all Even Start projects, children gained at the rate of .91 PSI items per month, compared with a developmental expectation of .40 items per month for children with no prior preschool experience. Exhibit 8.6 illustrates how the PSI growth trajectories of children with and without Even Start diverge over time. The trajectory for children prior to participation in Even Start shows growth at a rate of .40 items per month--the rate expected on the basis of normal development. The trajectory for children after participating in Even Start shows growth at an accelerated rate of .91 items per month.

Exhibit 8.6: PSI Growth for a Child Entering Even Start at Age Three Compared with Developmental Growth Estimated from Pretest Scores

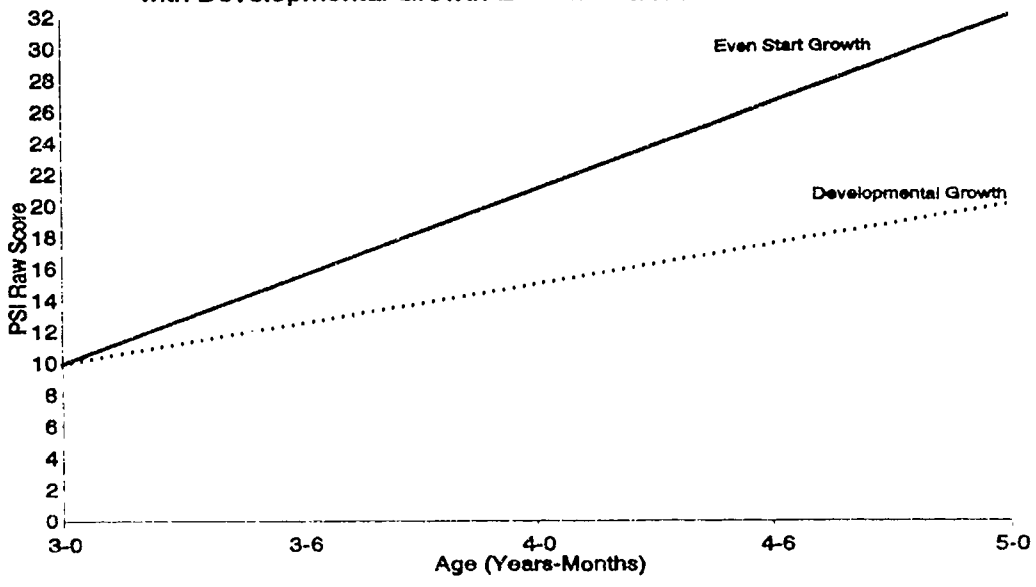


Exhibit reads: A child entering Even St at age three would be expected to gain .91 items per month on the PSI compared with the .40 items per mo h growth estimated from cross-sectional data from children without prior preschool experience.

The gain of .91 items per month can be expressed as the combination of .40 items per month due to normal development plus .51 items per month due to Even Start. We can therefore say that participation in Even Start more than doubles the expected rate of learning on the PSI. This is a substantial effect, one which is equivalent to the largest child-level gains observed on the PSI in other studies of preschool programs.

Another way to interpret the data is to express the size of the effect in terms of standard deviation units. Dividing the effect of .51 items per month by the PSI's standard deviation of 7.0 shows that participation in Even Start has an effect size of .07 standard deviation units per month. Findings presented earlier in this report showed that, on average, children participate in Even Start for about eight months. Thus, the NEIS data show that Even Start has an effect of .56 standard deviation units for the average Even Start child. This is a "medium-sized" effect by general standards of social science evaluations.

Exhibit 8.7 provides a comparison of the effect observed on the PSI in the Even Start evaluation with effects on the PSI as seen in four other large-scale evaluations of early childhood education programs conducted in the 1970s and 1980s. In the other evaluations, the developmental gain (no-treatment expectation) on the PSI ranged from .4 to .5 items per month, and the gain including the effect of the program under study ranged from .6 to 1.0 items per month. Children participating in Even Start fit the developmental pattern observed in the other studies exactly, gaining .40 items per month prior to entering Even Start. Once in Even Start, they gained at an improved rate of .91 items per month. This accelerated rate of learning on the PSI means that as Even Start children enter the public schools they are more likely to know basic concepts and precursors of kindergarten skills than they would have been in the absence of the program.

Information on how different subsets of Even Start children performed on the PSI is presented in Exhibit 8.8. The average monthly gains are remarkably stable across subgroups. That is, childrens' monthly gains on the PSI are roughly equivalent, regardless of age of child, gender, ethnic background, prior preschool experience, education level of parent, language in which the test was administered, family structure, or annual family income. This argues that Even Start does equally well at teaching school readiness skills to quite varied groups of children, and that the overall estimate of .91 items per month is a robust indicator. Where it appears that large differences exist between subgroups, the sample size in one of the subgroups tends to be small, casting doubt on the reliability of the estimate.

Child Literacy as Measured by The Peabody Picture Vocabulary Test

The Peabody Picture Vocabulary Test-Revised (PPVT) measures receptive (hearing) vocabulary, and gives a quick estimate of verbal or literacy-related skills.

Description of the Measure

The PPVT is an individually administered test that requires 15 to 20 minutes per child and is appropriate for children between the ages of two and 18 years. In this evaluation, the

Exhibit 8.8

Average Monthly Gain in Raw Score Points on the PSI for Selected Variables (NEIS Data Set)

Group	Monthly Gain		
	N	Mean	SD
Age at pretest			
3-0 to 3-11	1,127	.85	.88
4-0 to 4-11	1,529	.96	.81
5-0 to 5-11	74	.87	.96
Gender			
Male	1,288	.89	.86
Female	1,316	.94	.83
Ethnic background			
Asian	46	1.16	.77
African-American	831	.92	.86
Hispanic	681	.95	.96
Native American	85	.87	.82
White	1,003	.88	.75
Prior preschool experience			
No	988	.99	.86
Yes (prior to Even Start)	275	.98	.76
Yes (Even Start prior to age 3)	1,378	.84	.83
Highest grade attained by target parent			
Grade 0-4	91	.90	.99
Grade 5-8	492	.91	.94
Grade 9-12	1,520	.91	.81
Diploma or GED	488	.95	.76
Language of test administration			
English	2,208	.91	.82
Spanish	430	.92	1.00
Both	75	.90	.82

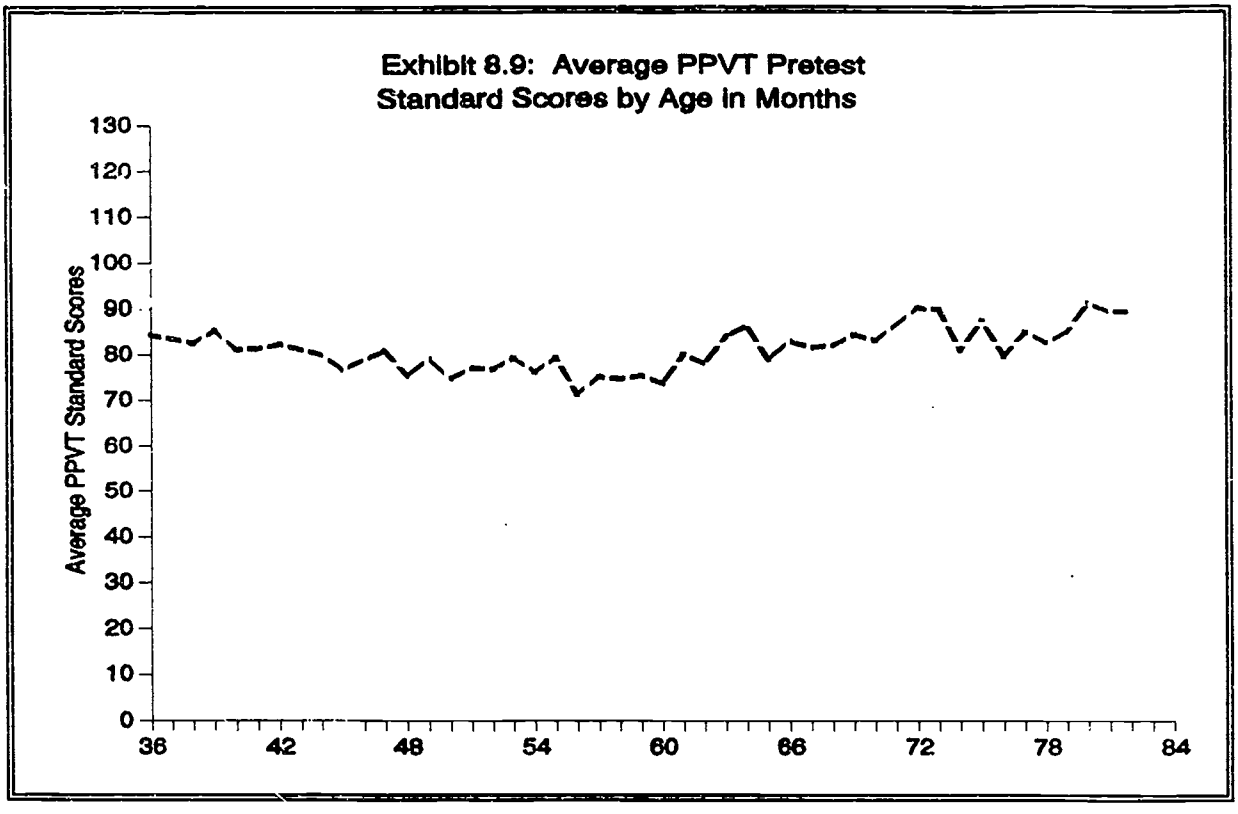
Exhibit 8.8
(continued)

Average Monthly Gain in Raw Score Points on the PSI for Selected Variables (NEIS Data Set)

Group	Monthly Gain		
	N	Mean	SD
Family structure			
Single parent	932	.93	.89
Extended family	343	.93	.90
Couple	1,385	.90	.79
Annual income			
Under $5,000	925	.95	.91
$5,000 - $9,999	732	.86	.84
$10,000 - $14,999	485	.89	.79
$15,000 - $19,999	245	.93	.74
$20,000 - $24,999	130	.99	.88
$25,000 or more	93	1.02	.76
Total	**2,730**	**.91**	**.85**

Exhibit reads: Children tested twice with the PSI gained an average of .91 raw score points per month. Since developmental growth accounts for about .40 raw score points per month, Even Start early childhood education more than doubles the growth rate of readiness skills for participating children.

the delayed test-retest reliability is .78. A great deal of validity information is available for the PPVT and the TVIP. Issues of content validity, construct validity, and criterion



program effect (Exhibit 8.10). A graph of scores over the three data collection points confirms that there are few differences between the program and control groups (Exhibit 8.11). Earlier in this discussion we saw that most children in the In-Depth Study control group had entered an early childhood education program by the time of the second posttest. This could partly explain the pattern seen in Exhibit 8.11, where Even Start appears to be making a difference at the first posttest (though not a statistically significant one), but the control group has moved ahead a bit by the second posttest (again, not significantly so).

Effects as Measured by the NEIS. Data from the NEIS lead to a different conclusion than that which was drawn from the In-Depth Study data. Based on the NEIS, we see that Even Start children make significant gains on the PPVT. Exhibits 8.12 and 8.13 present the results of analyses based on NEIS data from all Even Start projects. The exhibits show average pretest-posttest gains on the PPVT and TVIP, expressed in standard score points per month (gains are expressed in points per month because children participate for different numbers of months).

Based on the norms analyses described above, we do not expect to see any change in PPVT standard scores due to maturation. However, we do see that children participating in Even Start gain an average of .94 standard score points a month on the PPVT and .92 points per month on the TVIP. Dividing by the PPVT standard deviation yields a per month effect of .06 standard deviation units. Multiplying by eight months, the average

Exhibit 8.10

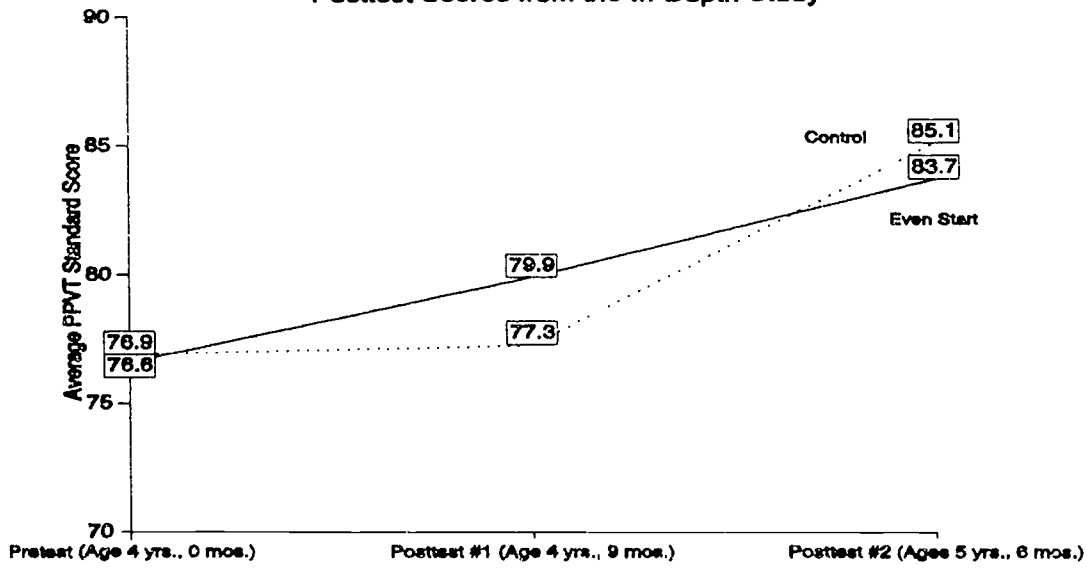
Peabody Picture Vocabulary Test: Effects from the In-Depth Study

	Even Start (n = 76)		Control (n = 70)	
	Mean	S.D.	Mean	S.D.
Pretest	76.6	19.5	76.9	17.2
Second Posttest	83.7	17.1	85.1	17.8
Gain	7.1*	--	8.2*	--
Program Effect (Effect Size)		-1.1 points (.06 s.d.)		

* $p < .05$

Exhibit reads: Even Start children in the In-Depth Study averaged 76.6 points on the PPVT pretest.

Exhibit 8.11: Peabody Picture Vocabulary Test: Pretest and Posttest Scores from the In-Depth Study



Note: Based on sample of children with data at all three testing points (Even Start n = 76; control n = 70).
Exhibit reads: Even Start children received an average standard score of 83.7 at the second posttest.

Exhibit 8.12

Average Monthly Gain on the PPVT in Standard Score Points for Selected Variables (NEIS Data Set)

Group	Monthly Gain		
	N	Mean	SD
Age at pretest			
3-0 to 3-11	858	.39	2.11
4-0 to 4-11	1,309	1.47	2.30
5-0 to 5-11	571	.89	1.92
6-0 to 6-11	289	.51	1.86
7-0 to 7-11	92	.34	2.19
Gender			
Male	1,528	.99	2.20
Female	1,461	.86	2.15
Ethnic background			
Asian	50	1.52	2.62
African-American	1,091	1.14	2.35
Hispanic	382	.81	2.37
Native American	177	.22	1.61
White	1,324	.89	1.96
Prior preschool experience			
No	961	1.21	2.19
Yes (prior to Even Start)	504	1.03	2.14
Yes (Even Start, prior to age 3)	1,545	.76	2.19
Highest grade attained by target parent			
Grade 0-4	33	.65	3.17
Grade 5-8	460	.97	2.17
Grade 9-12	1,843	.96	2.19
Diploma or GED	626	.87	2.10
Form administered at pretest			
Form L	2,904	1.00	2.18
Form M	215	.10	2.14

Exhibit 8.12
(continued)

Average Monthly Gain on the PPVT in Standard Score Points for Selected Variables (NEIS Data Set)

Group	Monthly Gain		
	N	Mean	SD
Family structure			
Single parent	1,214	1.02	2.30
Extended family	349	1.15	2.13
Couple	1,476	.84	2.12
Annual income			

Exhibit 8.13

Average Monthly Gain on the TVIP in Standard Score Points by Age at Pretest

Age at Pretest	Monthly Gain		
	N	Mean	SD
3-0 to 3-11	148	.48	2.45
4-0 to 4-11	202	1.08	2.45
5-0 to 5-11	129	1.30	2.26
6-0 to 6-11	78	.56	2.12
7-0 to 7-11	24	1.31	1.84
Total	**581**	**.92**	**2.36**

Exhibit reads: Children tested twice with the TVIP had an average monthly gain of .93 in standard score points.

Note: Combined norms (Mexico and Puerto Rico) were used in obtaining standard scores.

Child's Emergent Literacy Test

In addition to the PSI and PPVT, we assessed children in the In-Depth Study using a brief set of items designed to tap children's emergent literacy skills. This measure was not

couple of minutes to administer. The testing was done at the same timepoints as the PSI and PPVT.

Because the CELT was created for this evaluation, there is no history of psychometric characteristics. The reliability (Cronbach's alpha) of the CELT as administered in this evaluation is .76. The CELT consists of 16 items, each is scored correct or incorrect, with a total score ranging from zero to 16.

Pretest Levels on the CELT

Children in Even Start and in the control group scored quite similarly on the CELT at pretest: the Even Start pretest mean was 4.1 and the control group pretest mean was 4.5 (see Exhibit 8.14). Standard deviations were almost identical: 2.9 for Even Start and 3.1 for the control group. We have no basis of comparison for these pretest scores since the instrument has not been used in other studies. We should note that ceiling effects are not a problem, since pretest means are between four and five points out of a total of 16. However, the low pretest scores may indicate that the measure is too difficult, and hence is not sensitive to gains for children at this age.

child's posttest PPVT score than demographic variables such as family income or the number of children's books in the home.

These analyses were based on 614 families with data for all of the variables in the regression. The final regression model predicted the PPVT posttest, controlling for the PPVT pretest, CASAS pretest, number of hours in early childhood education, and number of hours in parenting education. Together, these variables explained 42 percent of the variance in the PPVT posttest scores.

Exhibit 8.15 shows how gains on the PPVT are related to the amount that Even Start children participate in early childhood education and to the amount that their parents participate in parenting education:

- Even Start children are expected to gain 1.1 points on the PPVT for each 100 hours that they participate in an early childhood education program.
- Even Start children are expected to gain an additional 1.4 points on the PPVT for each 100 hours that a parent participates in parenting education.

Exhibit 8.15: PPVT Gains as Predicted by Amount of Early Childhood Education and Amount of Parenting Education

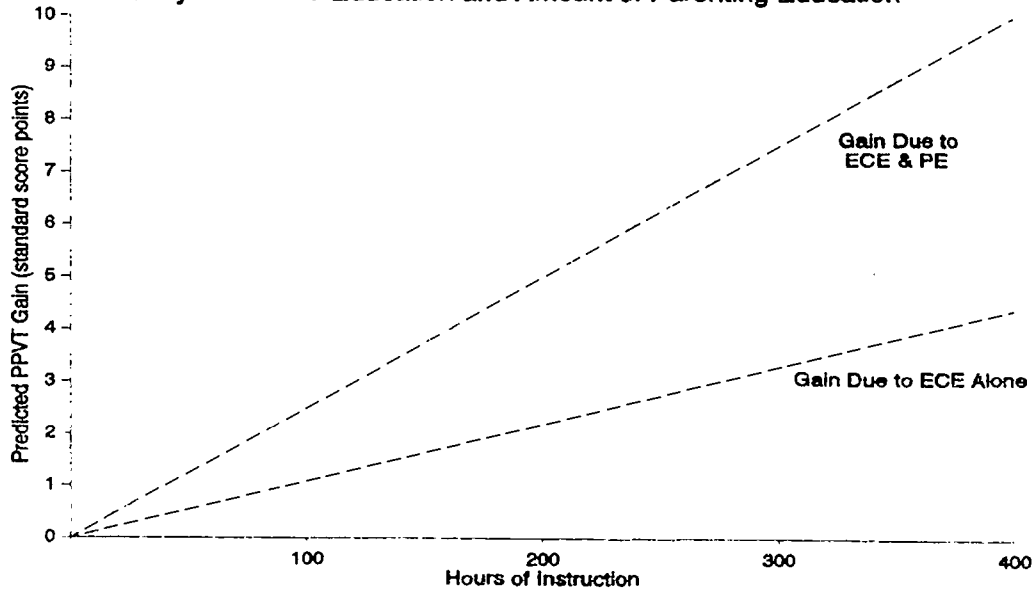


Exhibit reads: Even Start children gain 1.1 points on the PPVT for each 100 hours that they participate in Early Childhood Education. They gain an additional 1.4 points on the PPVT for each 100 hours that a parent participates in Parenting Education.

We can translate these findings into information that is useful to program planners by showing the PPVT scores (and their percentile equivalents) that are expected to result from some typical combinations of early childhood education and parenting education programs (Exhibit 8.16). The exhibit shows three levels of intensity of parenting education: 36 hours--corresponding to a 1-hour per week program lasting for a 36-week school year; 108 hours--corresponding to a 3-hour per week program lasting for a 36-week school year; and 180 hours--corresponding to a 5-hour per week program lasting for a 36-week school year. It also shows two levels of intensity of early childhood education that could be included as part of a typical preschool program: 270 hours--corresponding to a 3-day, 2.5 hour per day program lasting for a 36-week school year; and 540 hours--corresponding to a 5-day, 3 hour per day program lasting for a 36 week school year.

Exhibit 8.16

PPVT Standard Scores for the Average Even Start Child as Predicted[a] by Intensity of Early Childhood Education and Intensity of Parenting Education

		Intensity of Early Childhood Education	
		270 hours (2.5 hours/day * 3 days/week * 36 week school year)	**540 hours (3 hours/day * 5 days week * 36 week school year)**
Intensity of Parenting Education	**36 hours (1 hour/week * 36 week school year)**	85.6 points (17th percentile)	88.6 points (22nd percentile)
	108 hours (3 hours/week * 36 week school year)	86.6 points (19th percentile)	89.6 points (24th percentile)
	180 hours (5 hours/week * 36 week school year)	87.6 points (20th percentile)	90.6 points (26th percentile)

Even Start children participating in a relatively low-intensity program consisting of 1 hour per week of parenting education combined with 7.5 hours per week of early childhood education would be expected to have a PPVT posttest score of 85.6 points, corresponding to the 17th percentile nationally. On the other hand, Even Start children participating in a high-intensity program consisting of 5 hours per week of parenting education combined with 15 hours per week of early childhood education would be expected to have a PPVT posttest score of 90.6 points, corresponding to the 26th percentile nationally.

Two reference points help in interpreting the expected scores shown in the exhibit:

- **Average ECE and PE:**[8] The expected PPVT posttest score for an Even Start child who received the average amount of early childhood education (268 hours) and whose parents received the average amount of parenting education (100 hours) is 86.5 points (19th percentile).

- **No ECE or PE:** An Even Start child who receives no early childhood education and whose parents receive no parenting education is expected to have a PPVT score of 82.1 points (12th percentile). When placed in a high-intensity Even Start program for a year, we expect that same child to have a PPVT score of 90.6 points (26th percentile).

It is important to realize that the levels of programmatic intensity described above are provided for purposes of illustration only--so that the reader can see how some typical programmatic approaches to an Even Start program would be expected to affect PPVT scores. However, we do not know whether there is any special configuration of services that works better than other configurations. For example, we do not know whether 500 hours of early childhood education received in one year is more or less effective than 500 hours accumulated over two years.

What we do know is that the total number of hours of early childhood education received

necessarily be expected to relate to the PPVT. Parenting education activities often are targeted at developing parent's abilities as teachers of their children, and children's language development is exactly what is taught through many of the parenting activities emphasized in Even Start, such as reading to children. On the other hand, there is no special reason that participation in adult education programs, which focus only on the development of adult-level skills, should yield immediate benefits for children.

Finally, a similar analysis was conducted to determine whether amount of parenting education was related to PSI posttest scores. While we noted some of the same relationships seen in the PPVT analysis (e.g., a positive relationship between the amount of time children spend in early childhood education and PSI posttest scores), the amount of time spent in parenting education was not significantly related to PSI posttest scores.

It is likely that parenting education contributes to improved PPVT scores but not PSI scores precisely because parenting education often focuses on reading to children, which in turn enhances language development. The skills measured by the PSI are more readily learned in a preschool setting than those measured by the PPVT.

Effect of Service Variations on Child Outcomes

Service Intensity. One hypothesis about Even Start is that higher intensity services ought to lead to greater gains on outcome measures. Our study design does not allow us to address this question directly, because we have not randomly assigned families to projects offering different levels of service intensity. Still, data from the NEIS offer the opportunity to examine the relationship between service intensity and outcomes as it occurs naturally. The drawback to this approach is that we cannot disentangle the observed relationship from characteristics of families (e.g., level of need, motivation) that predispose them to participate more or less fully in Even Start.

With this caveat in mind, data from the NEIS show a statistically significant, positive relationship between total hours of early childhood education and total gains on the PSI (Exhibit 8.17). Each 100 hours of exposure to early childhood services translates into a gain of about 1.2 points on the PSI (about 1/6 of a standard deviation). Also, these findings for the PSI are consistent with findings on the relationship between amount of service and PPVT scores, presented in the preceding section. Though not shown graphically, a similar relationship exists between monthly hours of early childhood education and monthly gains on the PSI and PPVT. Both of these findings make sense: greater exposure to an early childhood education setting results in larger gains.

Home-Based Services. Another question that has been raised is whether the extent to which services are home-based has an effect on outcomes. We have the same caveat for this analysis as for the analysis of the effect of service intensity on child outcomes--families have not been randomly assigned to projects that offer different levels of home-based services. In any case, data from the NEIS show no strong relationship between extent of home-based services and either PSI or PPVT scores.

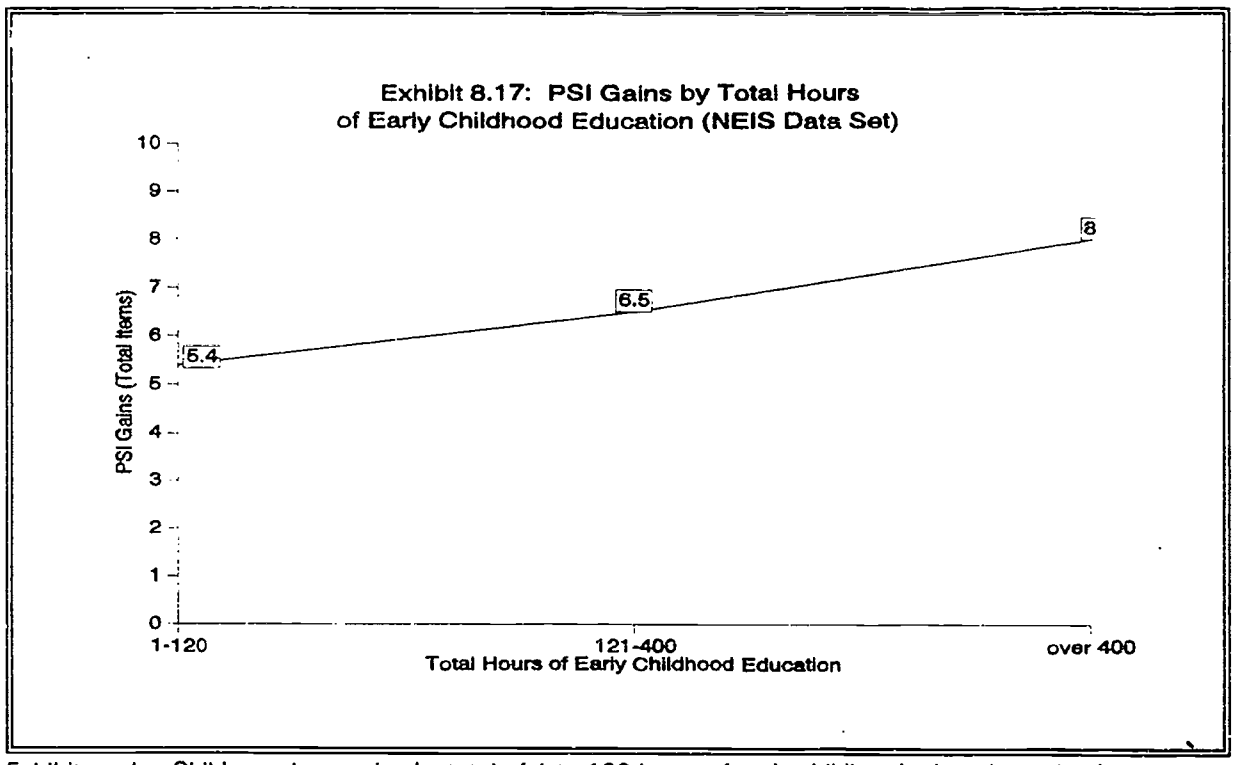


Exhibit reads: Children who received a total of 1 to 120 hours of early childhood education gained an average of 5.4 items on the PSI.

Quality of Staffing. A final question that has been posed is whether the quality of the staff in an Even Start project is related to child outcomes. This analysis is subject to the same caveats as the above analyses. Further, our attempts to create project-level staffing indicators from data on years of experience, formal education of instructional staff, and inservice training were not very successful, and there were quite low correlations between these indicators and other project characteristics and outcomes.

A major limitation of the staffing data is that background information on staff from collaborating agencies was not collected, and it is exactly these staff members who often are responsible for the direct provision of core services. Even when analyses were limited to projects in which Even Start staff were the primary providers of adult education and early childhood education, we observed low correlations between staff characteristics and outcomes. We suspect that the data collected on staffing may not be adequate to support the type of analyses we hoped to perform.

Conclusions About Effects of Even Start on Children

This evaluation assessed effects on children using three different measures: (1) the Pre-School Inventory, a measure of school readiness; (2) the Peabody Picture Vocabulary Test, a measure of hearing vocabulary; and (3) the Child's Emergent Literacy Test, a measure of emergent literacy skills.

On each of the measures, there are no statistically significant differences between children in Even Start and the control group at the second posttest using data from the In-Depth Study. While these results are discouraging, they need to be considered in light of two findings that work against program effects: (1) the majority of children in the In-Depth Study control group were enrolled in some type of early childhood program by the second posttest, and (2) nearly half of the Even Start children in the In-Depth Study were no longer enrolled in an Even Start early childhood program by the second posttest. The impact of this involvement by the control group in early childhood education is seen most dramatically on the PSI, where significant program effects reported at the first posttest erode by the second posttest. The results suggest that, when control group children enroll in an early childhood program, they learn many of the same skills the Even Start children learned in preschool. What is not known is the long-term effects of this lag time in learning. Since most of the control group children are in kindergarten by the second posttest, it appears that they are learning many of the basic readiness skills (e.g., shapes, colors, directionality) during their first year of public school. If many of the Even Start children learned these skills in a preschool program, they may be progressing to other school skills (e.g., prereading) during their kindergarten year. Thus, the finding that the differences between Even Start and control children on basic readiness skills are diminished when control children reach kindergarten does not preclude other longer-term impacts of Even Start on school performance.

In contrast to the In-Depth Study, data from the NEIS show positive gains on the PSI and PPVT, above and beyond what would be expected in the absence of the program.

A key difference between the NEIS and In-Depth Study is the inclusion or exclusion of families no longer in Even Start. As described in the general approach to the analysis, children were posttested for the NEIS at the end of the program year or just prior to program exit. In contrast, children in the In-Depth Study were tested at fixed time points regardless of whether they were still in Even Start. Thus, the NEIS can address the question of the potential impact of Even Start for families who remain in the program, while the In-Depth Study offers a longitudinal look at children who had varying levels of participation in the program.

Attributing the gains seen on the NEIS to Even Start is given some credibility by analyses of the relationship between program participation and outcomes within the Even Start group. Greater gains are seen on the PSI and PPVT both for children (a) with more hours in an Even Start early childhood education program and (b) whose parents logged more hours in parenting education. These results suggest encouraging program effects. However, without a control group, it is not possible to unequivocably attribute these

Chapter Nine

Effects of Even Start Projects on Parent Literacy

This evaluation measured the effects of Even Start on the literacy skills of parents in the following areas: (1) functional literacy level on a reading test, (2) the percentage of Even Start adults who obtained their GED certificate, and (3) parental reports of their own reading and writing activities in the home. This section of the report includes discussions of:

- Functional Literacy of Adults as Measured by the CASAS
- Attainment of a GED Certificate
- Reading and Writing Activities in the Home
- Conclusions about Effects of Even Start on Parent Literacy Skills

Functional Literacy of Adults as Measured by The Comprehensive Adult Student Assessment System

The Comprehensive Adult Student Assessment System (CASAS) is an adult-oriented functional assessment system that measures a broad range of adult literacy skills and their application in real life domains including consumer economics, government and law, occupational knowledge, community resources, and health (Rickard et al., 1990). Although the CASAS measures reading, writing, math and problem solving skills, this evaluation used only the Reading Survey achievement test in order to reduce respondent burden and because we expected Even Start's effects to be more prominent in reading than in math.

Description of the Measure

The CASAS has the flexibility to measure participants involved in diverse adult education programs, spanning the range from non-readers to adults at the GED or high school level. An untimed paper-and-pencil test, the CASAS Reading Survey may take as long as 60 minutes to complete. The CASAS has been used with adult education learners in 27 states. The test is used in adult education and in job training programs, with both native and non-native English speakers. It also has been accepted as a project in the National Diffusion Network. The CASAS is being used in the National Evaluation of Adult

GAIN program (CASAS, 1990), and in the evaluation of California's 321 adult education programs (CASAS, 1991).

CASAS reading scores range from 150 to 260. The test developers suggest the following interpretation of CASAS scale scores:

- **Beginning literacy (below 200)**: Adults scoring below a scale score of 200 have difficulty with the basic literacy skills needed to function in an employment setting and in the community. While these adults can handle routine, entry-level jobs, they may have trouble following simple directions and safety procedures.

- **Basic literacy (200 through 214)**: Adults scoring between scale scores 200 and 214 can function in entry-level jobs that require only minimal literacy skills. They can fill out simple applications.

- **Intermediate literacy (215 through 224)**: Adults scoring between scale scores 215 and 224 are able to perform basic literacy tasks in a functional employment setting. They are generally able to function in jobs or job training that involves following written instructions and diagrams, though they usually have trouble following complex sets of directions.

- **High school literacy (225 and above)**: Adults scoring above a scale score of 224 can usually perform work that involves written directions in familiar and some unfamiliar situations. They can function at a high school entry level in basic reading and, if they do not have a high school diploma, can profit from instruction in General Education Development and have a high probability of passing the GED test in a short time.

Sticht (1990) found these interpretations to be reasonable and reported general correspondence between CASAS scale scores above 225 and the ninth to twelfth grade reading levels on the Tests of Adult Basic Education (TABE) and the Adult Basic Learning Examination (ABLE). We have found minimal data on the psychometric characteristics of the CASAS. A correlation of .70 between the CASAS reading test and the ABLE was reported in unpublished data. To obtain an estimate of test-retest reliability, we calculated the correlation between pretest and posttest scores for adults who were posttested less than 90 days after the pretest. The correlation was .86, suggesting that the CASAS is a reliable measure. The true test-retest reliability might be even higher since this estimate is based on data using alternate forms of CASAS tests.

For the NEIS, Even Start staff administered the CASAS Reading Survey. The test has four levels, A through D, with 24 to 40 items per level and alternate forms of each level. Scale scores link the levels into a continuous scale of achievement. Staff administered a short "locator" test to assist in identifying the appropriate level of the CASAS. There is no Spanish version of the CASAS, and project staff were instructed to use their own

judgment as to the appropriateness of administering the test to adults with limited reading skills in English. For the In-Depth Study, the CASAS was administered by trained data collectors using the same schedule and rules as all other In-Depth Study measures.

Effects on the CASAS

Data to assess program effects on the CASAS are available from the In-Depth Study and from the NEIS. The NEIS data show pre-post gains that are statistically significant and are about ⅓ standard deviation in size. These gains are as large or larger than those seen in other evaluations of adult education programs. The In-Depth Study data show statistically significant gains on the CASAS for both the Even Start and control groups, but there is no significant effect of Even Start on this measure. Both data sets show a significant relationship between amount of adult education instruction and gains on the CASAS.

Effects as Measured by the In-Depth Study. Adults in the In-Depth Study were pretested and then posttested twice: once nine months after the pretest, and again 18 months after the pretest. Comparing scores at the pretest to scores at the second posttest we see that adults in Even Start gained an average of 3.7 points on the CASAS, compared to 3.6 points for adults in the control group (Exhibit 9.1). Both of these gains are statistically significant. However, the gains for the Even Start adults are not appreciably larger than those of the control group. Graphing the CASAS scores at the three measurement points shows that gains in the Even Start and control groups are comparable across time, although the Even Start group consistently scores at a higher level than the control group (Exhibit 9.2).

In an effort to understand more about this pattern of gains, we examined data on the extent to which adults in Even Start and in the control group participated in adult education activities. At each data collection point, adults in Even Start and the control group were asked whether they had participated in adult education classes during the previous year (adults in the control group were free to participate in any educational programs offered in the community).

Exhibit 9.3 shows that a larger percentage of Even Start adults than control group adults (47 percent vs. 26 percent) reported that they participated in adult education prior to the pretest.[9] This was unexpected, because the groups were randomly assigned and were

[9]These participation rates are based on parents' self-report and may underestimate actual participation. However, a comparison of self-report data for the Even Start group with contact log data supplied by Even Start project staff shows fairly high overlap between the two data collection methods. For example, at the first posttest, only 11 percent of adults in Even Start indicated that they did not participate in adult education when the program's contact log data recorded more than 20 hours of adult education. It is possible that project staff who completed the contact logs used a broader definition of adult education (e.g., individual tutors) than the parents themselves used. These results suggest that the self-report data are valid, and we use them in these analyses in order to have comparable data sources for the program and control groups.

Exhibit 9.1

**CASAS Reading Survey:
Effects from the In-Depth Study
(Scale Score Points)**

	Even Start (n = 64)		Control (n = 53)	
	Mean	S.D.	Mean	S.D.
Pretest	229.4	13.7	226.8	16.9
Second Posttest	233.1	13.0	230.4	14.1
Gain	3.7*	--	3.6*	--
Program Effect (Effect Size)	0.1 points (.01 s.d.)			

* $p < .05$

Exhibit reads: Even Start adults in the In-Depth Study averaged 229.4 points on the CASAS Reading Survey pretest.

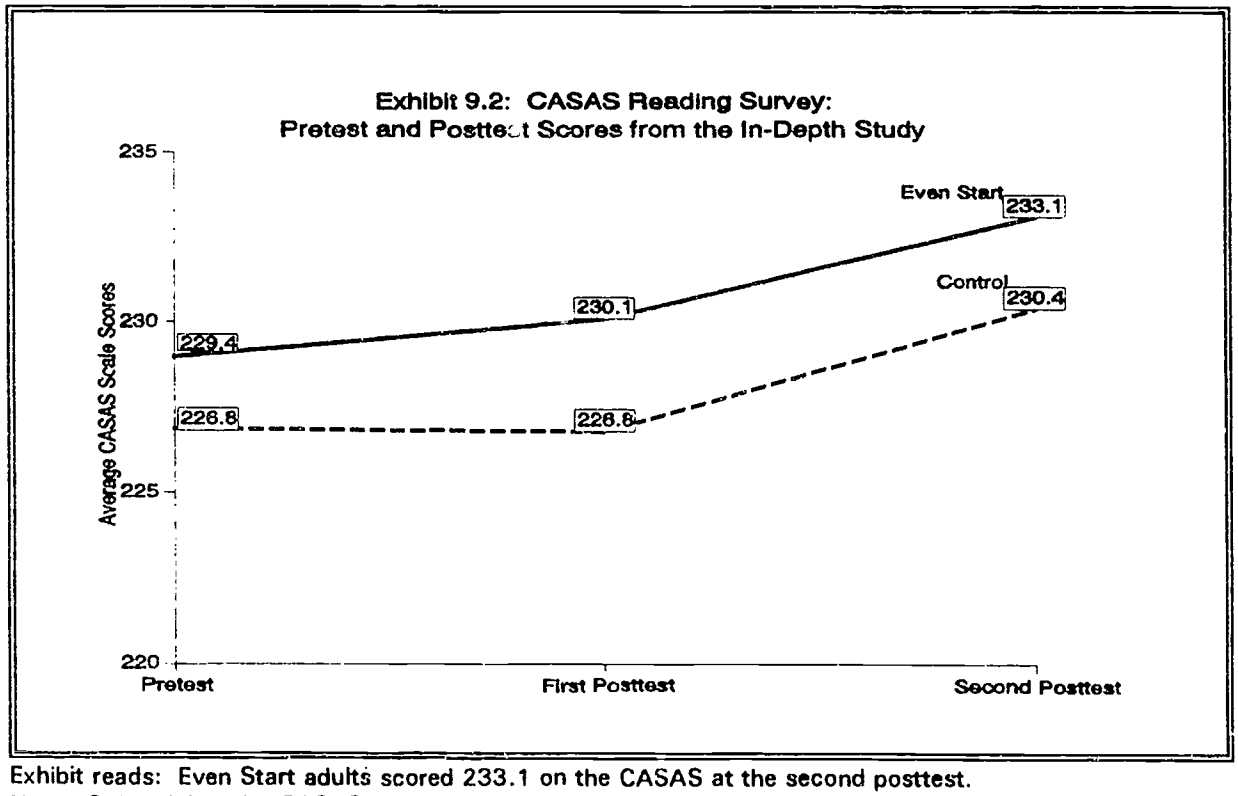


Exhibit reads: Even Start adults scored 233.1 on the CASAS at the second posttest.
Note: Only adults with CASAS scores at the three data collection points are represented on this graph (Even Start n = 64; control n = 53).

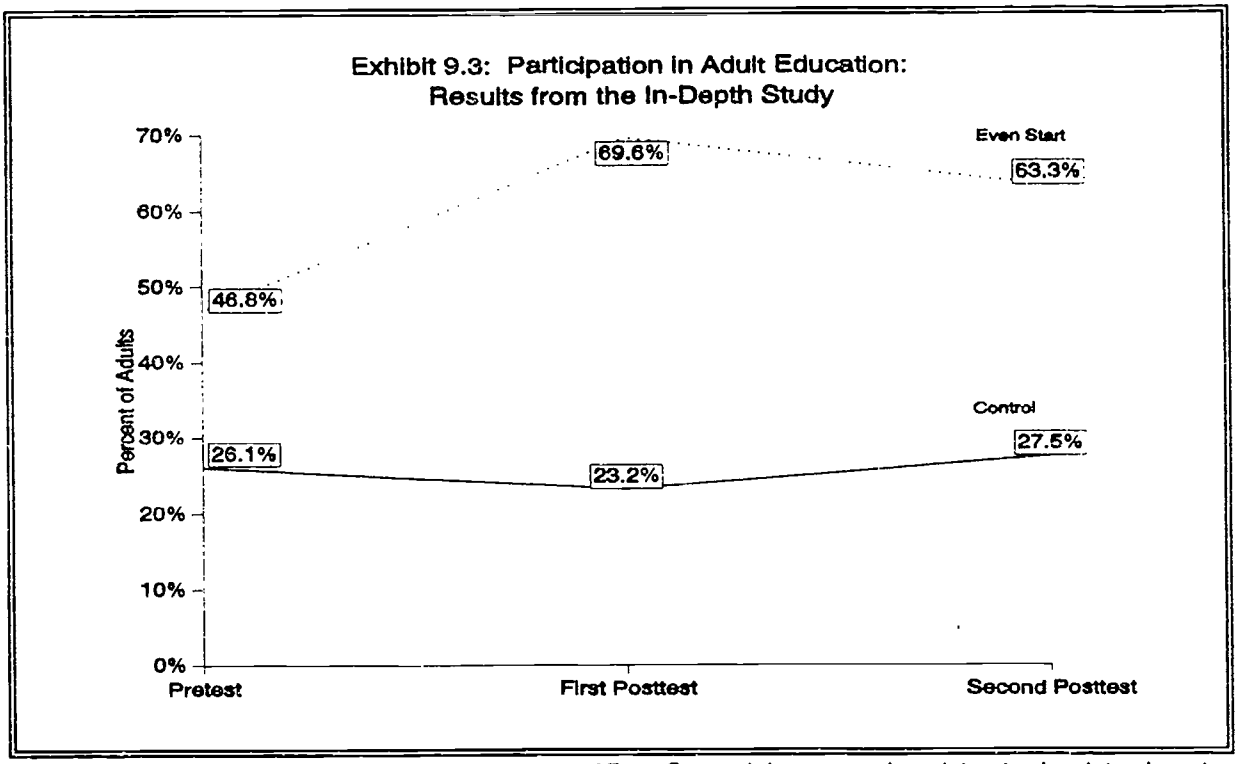


Exhibit reads: At the second posttest, 63.3 percent of Even Start adults reported participating in adult education during the past year.

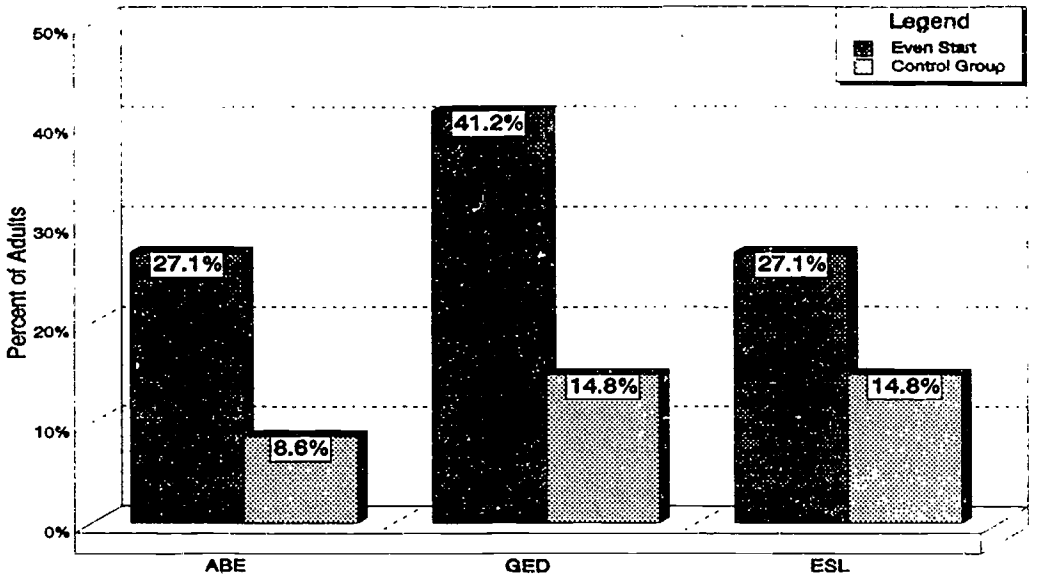
Note: Data are based on adult's self-reports of participation in ABE, ESL or GED classes for adults with information at three points (Even Start n = 79; control n = 69). In some cases pretesting was done shortly after program participation began. This accounts for the fact that Even Start adults participate in adult education at a greater rate than control group adults at the pretest.

comparable on many other background characteristics. It may be an indication that, for some adults, the pretest actually was given after Even Start adult education instruction had begun. Further, it is a possible explanation for the fact that Even Start adults scored higher than control group adults at the pretest.

As expected, Even Start adults reported significantly higher participation rates in adult education programs at both posttests than did control group adults. Still, approximately one-quarter of adults in the control group indicated that they were involved in either adult basic education (ABE) classes, preparation for the GED certificate, or ESL classes at the time of the pretest and both posttests.

Looking at the type of adult education in which adults participated, we see that adults in Even Start are more likely than adults in the control group to be taking ABE or GED classes (Exhibit 9.4). Among Even Start adults, 41 percent reported participating in a GED class in the year prior to the second posttest, compared with 15 percent of the control group, and 27 percent of Even Start adults are involved in adult basic education classes, compared with 9 percent of the control group. Both of these differences are statistically significant. However, the proportion of Even Start adults taking ESL classes

Exhibit 9.4: Type of Adult Education at Second Posttest: Results from the In-Depth Study



Exhibits reads: In the In-Depth Study projects, 27.1 percent of Even Start adults reported participating in adult basic education in the year prior to the second posttest.

(27 percent) is not significantly higher than the proportion of the control group (15 percent).

The CASAS results reported here show positive changes over time for adults in Even Start and the control group. About one-quarter of adults in the control group reported that they participated in adult education programs, although this does not appear to explain their gains on the CASAS.[10] These results suggest that the CASAS test might not be sensitive to certain types of instruction, such as preparation for the GED certificate. In addition, it appears that gains on the CASAS test can be expected in the absence of direct instruction. These gains also might be due to a testing effect, where adults are more relaxed and experienced about the requirements of the test at the posttest.

Effects as Measured by the NEIS. Analyses of data from the NEIS were limited to adults who had a valid pretest and posttest, who had at least three months between pretest and posttest, and who participated in at least 70 hours of adult education instruction between pretest and posttest. These criteria ensured that there was adequate time between test points for gains to occur, and that there was sufficient instruction to produce gains (the

[10]CASAS gains for adults who reported that they participated in adult education were no different than gains for adults who did not participate.

CASAS developers do not expect to see educationally significant gains with less than 70 to 100 hours of instruction).

If Even Start has had a positive effect on adult literacy, there should be improvement on the CASAS scale scores between pretest and posttest. We do not have a control group for the NEIS data, nor do we have a theory (as we do for the PSI or PPVT) that a portion of observed pre-post changes are due to some developmental process (although data from the In-Depth Study show that the control group gains over time).

Analysis of data from the NEIS shows that adults participating in Even Start for 70 hours or more over at least a three-month period gain an average of 4.6 scale score points on the CASAS. This gain is statistically significant, not a surprising result given the large number of adults included in the analysis. The effect size for the CASAS (gain divided by the CASAS standard deviation) is .31 standard deviation units, a value that is generally considered small in educational research (Exhibit 9.5).

CASAS Gains in Even Start vs. Other Adult Education Programs. Given this real but relatively small gain, and the fact that the In-Depth Study does not show any program effect, we asked whether this finding is unique to Even Start or if other adult education programs also have difficulty producing measurable gains. There have been few large-scale evaluations of adult education programs that contain outcome data that may be used for comparison purposes. Exhibit 9.6 compares the effect size for the CASAS gains of Even Start adults with the results from studies of other programs.

In one evaluation of federal 321-funded adult education programs in California, researchers (CASAS, 1992) found average gains of 3.0 scale score points (effect size: .20) for 973 students participating in adult basic education and 3.3 points (effect size: .22) for 1,757 students participating in English as a second language programs. All students took the CASAS Reading Survey after 80 to 100 hours of instruction. An earlier study of state-funded competency-based adult education programs in California (CBAE, 1987) found gains of 4.2 scale score points (effect size: .29) after 100 hours of instruction, although the measure was the CASAS Survey Achievement battery which includes fewer items to measure a wider range of literacy skills than the Reading Survey test. In an evaluation of the Kenan model, which is used by many Even Start projects, researchers (Darling and Hayes, 1989) found small gains on the reading subtest of the TABE (effect size: .29) over one project year covering an unspecified number of instructional hours.

These results show that Even Start is of comparable effectiveness to other adult education programs in improving the literacy skills of participating adults although the literacy gains in all of these programs appear to be moderate to small. This is reasonable since many Even Start projects use services provided by local adult education programs for this core service.

CASAS Gains by Hours of Instruction. The wide range in the length of time that families participate in Even Start and in the intensity of the adult education instruction provided by projects furnishes us an opportunity to strengthen our conclusions about CASAS gains.

Exhibit 9.5

CASAS Reading Survey: Gains from the NEIS (Scale Score Points)

Group	Gain			
	N	Mean	S.D.	Effect Size
Highest grade at intake				
Grades 0-4	48	8.5	12.0	.57
Grade 5-8	359	6.1	10.7	.41
Grade 9-12	1,107	4.1	9.2	.28
Diploma/GED	192	4.1	9.2	.28
Primary language in English				
Yes	1,298	3.5	8.9	.23
No	442	7.9	10.9	.53
Gender				
Male	90	5.0	11.5	.34
Female	1,617	4.5	9.5	.30
Ethnic Background				
Asian	30	6.1	12.8	.41
African-American	581	3.7	8.9	.25
Hispanic	454	7.5	11.0	.50
Native American	80	4.4	8.1	.30
White	606	3.3	8.8	.22
TOTAL	**1,751**	**4.6**	**9.6**	**.31**

Exhibit reads: Adults participating in 70 or more hours of adult education gained 4.6 scale score points on the CASAS reading.

Exhibit 9.6: Comparison of Effect Sizes for Even Start (NEIS Data Set) and Three Adult Education Programs

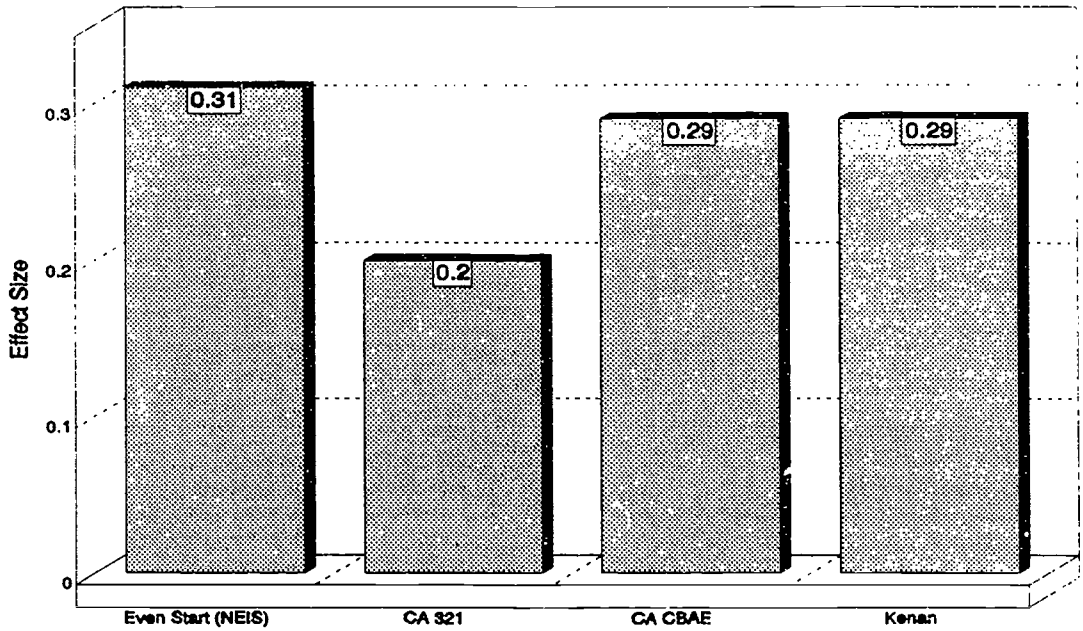


Exhibit reads: In Even Start, the effect size for gains on the CASAS is .31 standard deviation units.

If adults with many hours of adult education instruction improve more than adults who participate only for a few hours, we can be more confident that the instruction (and hence, Even Start) is responsible for this growth. It also is important to examine the effect of entry level on CASAS gains. Due to "ceiling effects" we expect smaller gains for adults starting near the highest valid CASAS score than for adults entering with lower entry scores.

Exhibit 9.7 shows CASAS reading gains in the NEIS for subgroups of adults defined by the number of hours of adult education. Adults who participated for less than 70 hours gained about 3.0 CASAS scale score points, adults who participated for 70-200 hours had an average gain of 4.3 points, and adults who participated for over 200 hours gained an average of 5.2 points. This relationship is statistically significant and provides some evidence that the adult education instruction provided through Even Start may be responsible for the gains reported earlier.

Among the program families in the In-Depth Study, there also is a greater gain on the CASAS for adults with more than 200 hours of adult education. These adults gained an average of 6.8 points from pretest to second posttest, compared to gains of 3.4 points for adults with less than 200 hours. The incremental gain in CASAS scores for each level of adult education is not seen in the In-Depth Study because many families in the middle level of adult education hours dropped out of the program between the first and second posttests.

Exhibit 9.7

CASAS Reading Gains by Hours of Instruction (Scale Score Points; NEIS Data Set)

Hours of Adult Education Instruction	Number of Adults	Average Pretest	Average Gain	Effect Size
1-69 hours	2,027	228.8	3.0	.20
70-200 hours	1,206	226.2	4.3	.29
Over 200 hours	578	227.9	5.2	.34

Exhibit reads: An average gain of 4.3 points on the CASAS was observed for adults with more than 70 hours of adult education. Even higher gains were observed with more than 200 hours.

The CASAS pretest and hours of adult education instruction accounted for about 88 percent of the variation in CASAS posttest scores on the NEIS. Exhibit 9.8 illustrates the relationship by estimating CASAS gains for selected entry level scale scores and hours of instruction. As can be seen, the greatest gains can be made with adults who enter with low CASAS scores. In fact, the exhibit shows that changes in posttest scores are much more sensitive to the starting point of the adult than they are to the number of hours of adult education instruction.

Attainment of A General Education Development Certificate

Even Start projects promote attainment of a high school diploma or a high school equivalency diploma such as the GED, as do most adult education programs. The rationale for this goal is based upon a belief that a diploma or GED increases the chance the adult will find employment, provides opportunities for higher wages, and improves the quality of life through enhanced self-esteem.

Description of the Measure

For the NEIS, projects reported each June whether Even Start adults attained a diploma or GED during the reporting year. We calculated the percentage of Even Start adults who attained a diploma or GED during the year. Since adults attending a secondary school do not qualify for Even Start, we can assume that the reported data generally reflected attainment of a GED, although other alternative diplomas are possible in some states. For the In-Depth Study, we calculated the percentage of adults in Even Start and in the control group who received their GED in the time between entry to the study and the time the second posttest was administered, eighteen months later.

Exhibit 9.8

Expected CASAS Reading Gains by Entry Level and Hours of Instruction (Scale Score Points; NEIS Data Set)

Entry CASAS Scale Score	Hours of Adult Education Instruction					
	50	100	150	200	250	300
200	11.0	11.2	11.4	11.6	11.8	12.0
210	8.4	8.6	8.8	9.0	9.2	9.4
220	5.7	5.9	6.1	6.3	6.5	6.7
230	3.1	3.3	3.5	3.7	3.9	4.1
240	0.5	0.7	0.9	1.1	1.3	1.5

Note: These expected gains are in scale score points. The estimates are based upon a regression equation (R = .88) of: posttest - (63.389 + .737 x pretest + .004 x hours)

Exhibit reads: Adults who entered Even Start with a CASAS score of 200 would be expected to gain 11.2 points after 100 hours of adult education instruction.

Effects on GED Attainment

Findings from both the In-Depth Study and the NEIS show that Even Start has had a statistically significant, positive effect on GED attainment.

Effects as Measured by the In-Depth Study. Data from the In-Depth Study show that 22.4 percent of participating adults in Even Start families attained a GED during the course of this study (an 18-month period) compared to 5.7 percent of participating adults in control group families (Exhibit 9.9). This is a statistically significant effect that also is large enough to be educationally meaningful.

We also examined, at each of the three data collection points, the percentage of adults in Even Start and the control group who had a high school diploma or GED (Exhibit 9.10). A smaller percentage of adults in the Even Start group had their high school diploma or GED at the time of pretest than was true of the control group (21 percent vs. 29 percent). This difference is not statistically significant, and is most likely an artifact of random assignment with a relatively small sample. At the first posttest, the percentage of adults with a GED was about the same in the two groups--32 percent in Even Start and 31 percent in the control group. By the second posttest, a significantly greater percentage of adults in Even Start (40 percent) had a GED or diploma compared with the control group (33 percent). It can be seen that the percentage of adults who gained the GED credential increased steadily among adults in Even Start over the eighteen months of the

Exhibit 9.9: Percentage of Adults Attaining a GED or Diploma: In-Depth Study and NEIS

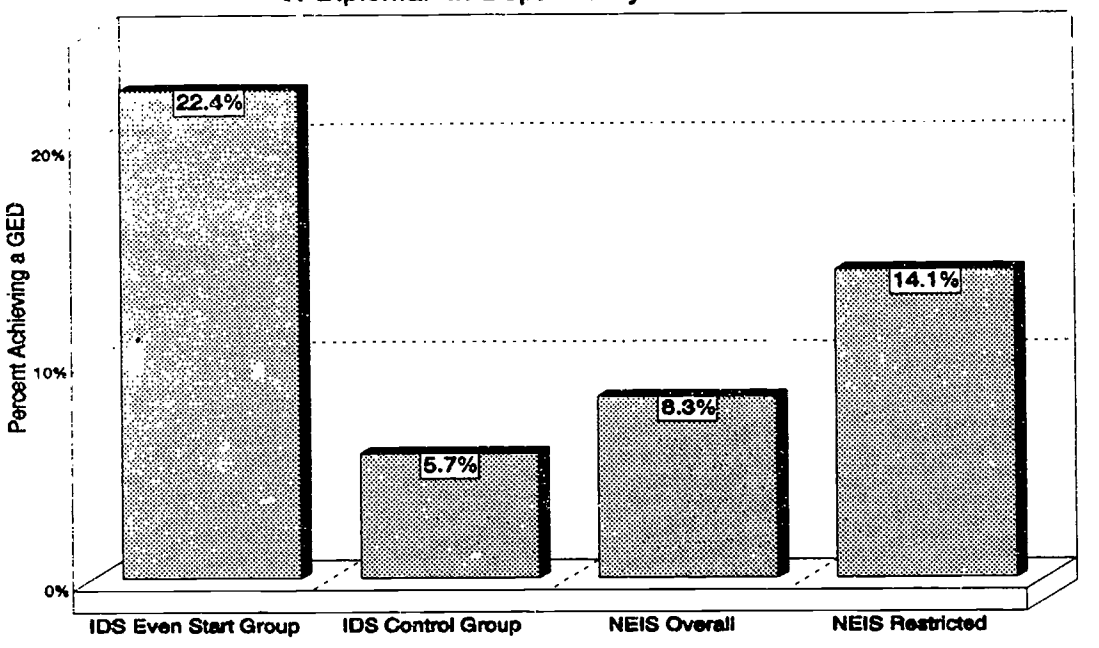


Exhibit reads: Across projects participating in the evaluation, 8.3 percent of the adults who participated in Even Start attained a GED or diploma.

Exhibit 9.10: Percentage of Adults with a High School Diploma or GED: In-Depth Study

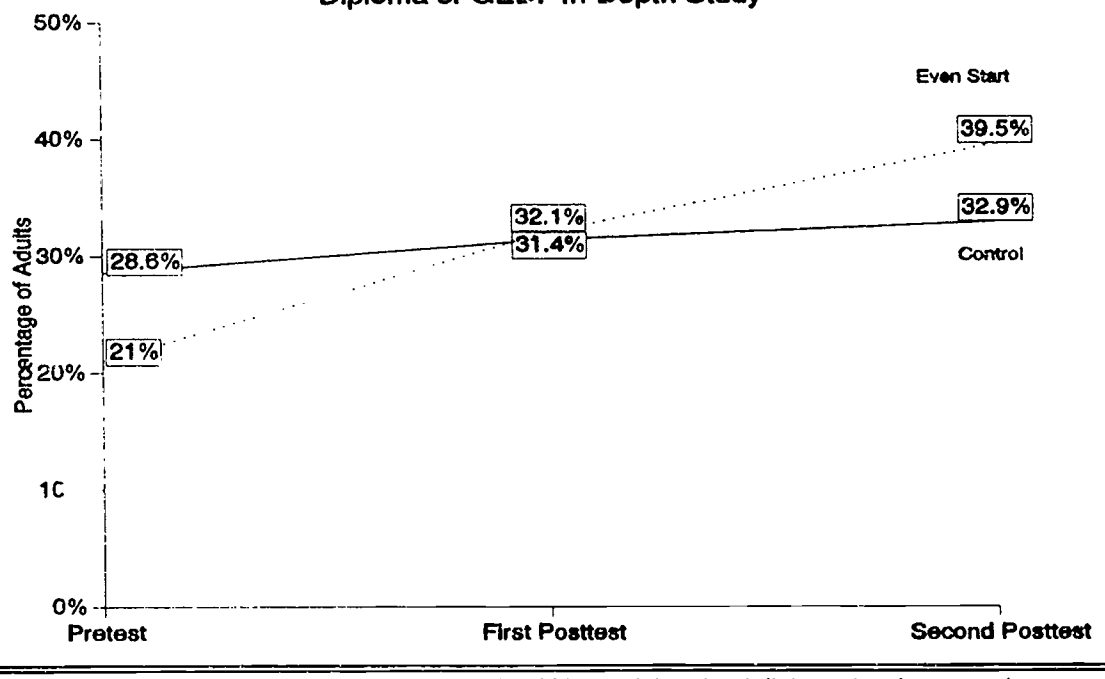


Exhibit reads: Among Even Start adults, 39.5 had a GED or high school diploma by the second posttest.

In-Depth Study. In contrast, the percentage of adults in the control group changes only slightly from the pretest through the second posttest.

Taken together, these results point to strong, positive effects of Even Start on attainment of a GED. As Exhibit 9.4 indicated, adults in Even Start are much more likely to be enrolled in a GED program than adults in the control group, giving further credence to the interpretation that the differences can be attributed to Even Start participation.

Effects as Measured by the NEIS. Data from the NEIS show that, across all Even Start projects participating in the evaluation, 8.3 percent of adults who entered Even Start without a GED or diploma achieved one while participating for a year or less in adult education services (Exhibit 9.11). However, attaining a GED is not a reasonable short-term goal for some adults in Even Start. For example, it is unlikely that an adult who enters Even Start with a sixth-grade education will be able to achieve a GED in the relatively short time frame of this study. Therefore, we conducted another analysis in which we restricted the sample of adults to those who entered with at least a ninth-grade education and who participated in Even Start for at least three months. By eliminating adults who entered with very low education levels or who received very small amounts of adult education, this restricted sample contains adults who ought to have had a reasonable chance of attaining a GED while in Even Start. As expected, the percentage of adults attaining a GED is higher in the restricted sample than in the overall sample (14.1 percent vs. 8.3 percent).

Variation in GED Attainment by Family Characteristics. Additional information about attainment of a GED in the NEIS data set is presented in Exhibit 9.11. There are no surprises in the exhibit, which shows that several variables are related to attaining a GED. As would be expected, attaining a GED during the year is related to grade at intake to Even Start: no adults who entered with less than a fifth-grade education attained a GED, compared to 10.2 percent of the adults who entered with some high school education. Attaining a GED also is strongly related to the adult's functional level on the CASAS: adults who scored at the "Beginning," "Basic," or "Intermediate" levels on the CASAS pretest rarely attained a GED (2.1 percent), while 16.1 percent of adults who scored at the "High School" level on the CASAS pretest attained a GED during the year. Total hours of adult education instruction is another variable that is related to attaining a GED: adults who had higher amounts of instruction were more likely to attain a GED than adults with lower amounts of instruction. High rates of GED attainment also were associated with being young, with having a relatively high annual income, with having English as one's primary language, and with being white, African-American, or Native American as opposed to Hispanic or Asian (this latter finding is likely related to the English language problems experienced by Hispanic and Asian immigrants).

Variation in GED Attainment Across Projects. Given the great variation among projects in the characteristics of adults served and the amount of adult education instruction received by participating adults, we expect to see substantial variation among projects in GED attainment. Exhibit 9.12 shows a distribution of the percent of adults attaining a GED for projects in the evaluation. Only adults entering Even Start with some high school

Exhibit 9.11

Number and Percent of Participating Adults Who Attained a GED While Served by Even Start (NEIS Data Set)

Group	All adults lacking a diploma at intake			Adults entering with at least a ninth grade education and participating more than three months		
	Total Adults	Attained GED		Total Adults	Attained GED	
		N	%		N	%
Highest grade at intake						
Grade 0-4	835	0	0.0	--	--	--
Grade 5-8	2,862	146	5.1	--	--	--
Grade 9-12	8,784	893	10.2	5,172	729	14.1
Functional level on CASAS at pretest						
Beginning to Intermediate	2,335	48	2.1	1,054	35	3.3
High School	4,564	734	16.1	2,663	532	20.0
Total hours of adult education instruction						
1-69 hours	6,693	414	6.2	2,266	233	10.3
70-200 hours	2,858	328	11.5	1,746	255	14.6
> 200 hours	1,720	280	16.3	1,160	241	20.8
Age at intake						
16-21	1,647	166	10.1	699	112	16.0
21-25	3,766	392	10.4	1,666	283	17.0
26-30	3,235	254	6.6	1,462	185	12.7
31-35	1,768	116	5.6	710	81	11.4
36-40	862	48	5.6	293	31	10.6
Over 40	664	26	3.9	195	18	9.2

Exhibit 9.11
(continued)

Number and Percent of Participating Adults Who Attained a GED While Served by Even Start (NEIS Data Set)

Group	All adults lacking a diploma at intake			Adults entering with at least a ninth grade education and participating more than three months		
	Total Adults	Attained GED		Total Adults	Attained GED	
		N	%		N	%
Family annual income						
Under $5,000	4,919	352	7.2	2,146	258	12.0
$5,000-9,999	3,540	281	7.9	1,398	203	14.5
$10,000-14,999	1,885	162	8.6	715	112	15.7
$15,000-19,999	828	86	10.4	352	60	17.0
$20,000-24,999	394	62	15.7	190	39	20.5
Over $25,000	305	49	16.1	138	29	21.0
Primary language is English						
Yes	8,773	948	10.8	4,214	661	15.7
No	3,461	82	2.4	866	59	6.8
Gender						
Male	1,025	81	7.9	404	46	11.4
Female	11,009	936	8.5	4,600	669	14.5
Ethnic background						
Asian	311	9	2.9	72	7	9.7
African-American	3,848	188	4.9	1,805	138	7.6
Hispanic	3,359	97	2.9	885	75	8.5
Native American	631	64	10.1	307	42	13.7
White	4,101	676	16.5	2,018	462	22.9
TOTAL	**12,481**	**1,039**	**8.3**	**5,172**	**729**	**14.1**

Exhibit reads: Among the 12,481 adults lacking a high school diploma or GED at intake, 8.3 percent attained a GED while participating in Even Start.

Exhibit 9.12: Project-Level Distribution of the Percentage of Adults Who Attained a GED (NEIS Data Set)

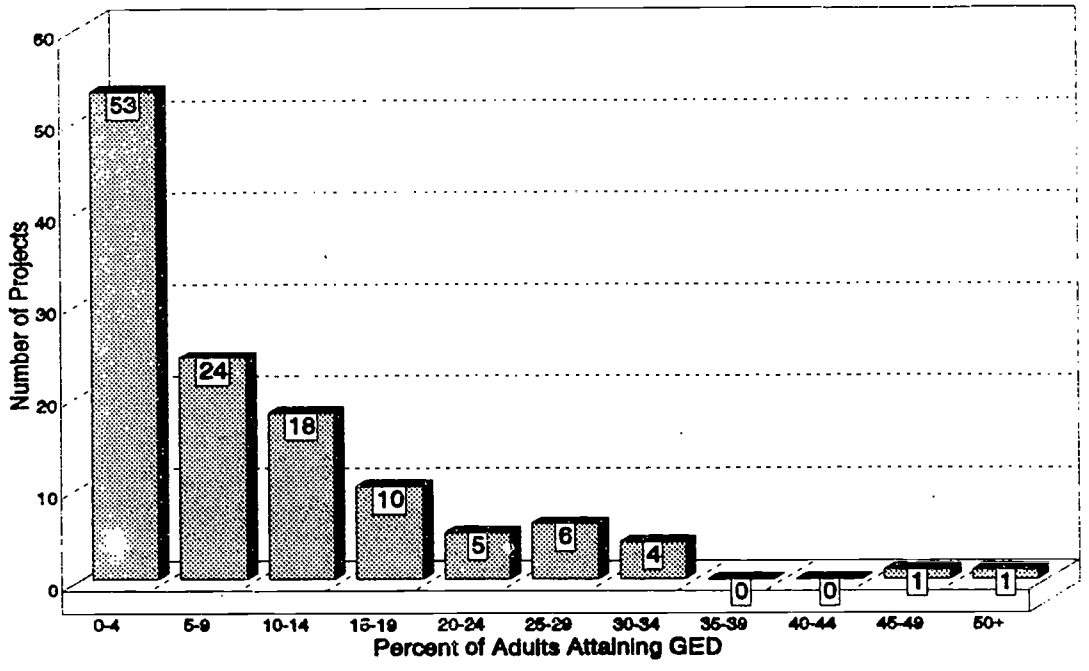


Exhibit reads: Less than five percent of the adults attained a GED in 53 projects while 50 percent attained a GED in one project. Only adults with nine to 12 years of schooling at intake and at least three months participation in adult education were included in the analysis.

education and at least three months of adult education instruction were included. Twenty-three projects had fewer than ten adults meeting these criteria, and hence were excluded from the analysis. Among the remaining 100 projects, the within-project percentage of adults attaining a GED ranged from zero to 60 percent. Over three-quarters of the projects (77) had less than ten percent of their adults attaining a GED while one project reported that more than 50 percent attained a GED.

Reading and Writing Activities in the Home

Two sets of questions were included in the In-Depth Study parent interview to ask parents about their own reading and writing habits in the home (these questions were not included in the NEIS portion of the evaluation). Both lists were adapted from a questionnaire used to evaluate the California State Library's Adult Learner Program.

Description of the Measure

The 13 self-report questions about reading activities ask how often the parent reads different types of literacy materials commonly found in and around the home including

junk mail, letters and bills, coupons, labels on food, cooking recipes, religious materials, instructions, street signs, newspapers, notes from school, T.V. Guide, magazines, and books. The 11 self-report questions about writing activities ask how often the parent writes at home in the following areas: checks, notes, recipes, forms or applications, dates on a calendar, letters, stories or poems, greeting cards, crossword puzzles, grocery lists, and a journal or diary.

These questions are intended to give an indication of the literacy environment in the home. Since most Even Start parents are expected to be poor readers, it is not realistic to expect them to be avid readers and writers. However, it is not known how much they use reading and writing in common household activities. If few of these activities are undertaken, then these homes would truly be impoverished literacy environments. On the other hand, an increase in the use of these simple literacy tasks would be a realistic goal for adults who are working to improve poor reading skills.

Parents responded to each of the questions on a three-point rating scale where a value of 1 meant that the activity was done "not at all," a value of 2 meant that the activity was done "sometimes," and a value of 3 meant that the activity was done "regularly." The composite score for a given parent was computed as the average rating for all completed items in the scale--higher scores mean a higher level of reading or writing activities in the home. Thus, the highest possible composite score is 3.0, and the lowest possible score is 1.0. The reliability (internal consistency) of both scales as assessed in this study is quite reasonable: .80 for the reading activities scale and .71 for the writing activities scale.

Effects on Reading and Writing Activities

Exhibits 9.13 and 9.14 summarize In-Depth Study analysis results for the Reading Activities scale and the Writing Activities scale. Parents in Even Start had a pretest mean of 2.2 points on the Reading Activities scale while parents in the control group had a pretest mean of 2.1 points. On the Writing Activities scale, parents in Even Start had a pretest mean of 1.8 points, while control group parents had a pretest mean of 1.7 points.

Thus, parents in each of the two groups scored in the middle of the scale range on the pretest, indicating that they do not report particularly low levels of reading and writing activities in the home. While these pretest levels may be higher than expected, there still is room for growth on the posttest. Exhibit 9.13 shows slight gains for the control group on ratings of reading activities between pretest and the second posttest. Exhibit 9.14 shows similarly small gains favoring the program group on writing activities. However, there are no significant program effects on either variable at the second posttest.

Exhibit 9.13

Parent Reading Activities in the Home: Effects from the In-Depth Study

	Even Start (n=84)		Control (n=74)	
	Mean	S.D.	Mean	S.D.
Pretest	2.2	0.4	2.1	0.4
Second Posttest	2.2	0.4	2.2	0.3
Gain	0.03	--	.07*	--
Program Effect (Effect Size)	-0.04 points (.10 s.d.)			

* $p < .05$

Exhibit reads: Even Start adults in the In-Depth Study averaged 2.2 points on Reading Activities in the home pretest.
Note: Scores range from 1 (no reading at all) to 3 (reading regularly).

Exhibit 9.14

Parent Writing Activities in the Home: Effects from the In-Depth Study

	Even Start (n=84)		Control (n=74)	
	Mean	S.D.	Mean	S.D.
Pretest	1.8	0.3	1.7	0.3
Second Posttest	1.9	0.4	1.8	0.3
Gain	0.12*	--	0.06	--
Program Effect (Effect Size)	.06 points (.20 s.d.)			

* $p < .05$

Exhibit reads: Even Start adults in the In-Depth Study averaged 1.8 points on Writing Activities in the home at pretest.
Note: Scores range from 1 (no writing at all) to 3 (writing regularly).

Conclusions About Effects of Even Start on Parent Literacy Skills

This evaluation measured effects on parent literacy skills in three areas: (1) functional literacy levels on a reading test, (2) the percentage of Even Start adults who obtained their GED certificate, and (3) reading and writing activities in the home. Even Start has had clear positive effects on GED attainment; the data are positive but mixed about effects on functional literacy; and there is no evidence that Even Start has changed reading and writing activities as reported by parents.

The results for GED attainment are strong and persuasive. Data from both the In-Depth Study and the NEIS lead to the same conclusion: that Even Start has led to a substantial increase in the percentage of adults attaining a GED. Without Even Start, it is likely that few of these adults would have found the needed assistance to reach this goal, as evidenced by the In-Depth study data on participation in GED classes.

Even Start projects may have been effective in improving the functional literacy of participating adults. Data from the NEIS show that adults who participate in Even Start achieve positive gains on the CASAS Reading Survey, gains which are comparable or greater in size than those observed in other studies of adult education programs. However, data from the In-Depth Study show that the gains of Even Start adults are not significantly greater than the gains achieved by a randomly assigned control group.

Data from the NEIS show that the amount of gain on the CASAS is directly related to the amount of instruction received through Even Start. This finding suggests that the observed gains can be attributed to adult education. However, this hypothesis is not necessarily supported by the In-Depth Study data. In this small randomized study we find that adults in Even Start are more likely to participate in adult basic education and GED preparation than adults in the control group, yet this does not appear to result in increased CASAS scores. These results call into question the sensitivity of the CASAS to sometypes of instruction. The CASAS gains seen among the control group also suggest that gains on the CASAS may be expected in the absence of formal instruction.

Finally, we were not able to detect any measurable program effects over an eighteen-month period on the extent to which parents use reading and writing as literacy tools in the home.

Chapter Ten

Effects of Even Start Projects on Parenting Skills

This section presents findings from the NEIS and the In-Depth Study about Even Start's effects on parenting skills. We use the term "parenting skills" to broadly include parents' knowledge about appropriate child behaviors and developmental needs as well as the activities and materials available in the home to foster children's development. Helping parents support their children's growth and development is one of the primary goals of Even Start, and the inclusion of parenting skills as a key program component is one of the features that distinguishes Even Start from other literacy and adult education programs. This section of the report includes discussions of:

- Adults' Personal Skills
- Home Learning Environment
- Parent-Child Reading Task
- Parents' Expectations for Their Children
- Conclusions about Effects of Even Start on Parenting Skills

Adults' Personal Skills

The parent interview for the In-Depth Study included two existing scales to assess parents' depression and sense of self-efficacy or locus of control. These measures were not part of the NEIS data collection.

Description of the Measures

Parents' personal skills have been found to be important mediating variables for parent-child interaction and parents' involvement in their children's education and development (Cleary, 1988; McLoyd, 1990; Parker et al., 1988). Parents who are depressed, have poor self-esteem, or feel "out-of-control" are not likely to provide optimal conditions for their children's growth and development (Upshur, 1988).

The Pearlin Mastery Scale was used to measure parents' sense of self-efficacy or locus of control. This scale assesses the extent to which an individual regards one's life as being under one's own control rather than determined by fate. This scale is included in the national evaluation of the JOBS program, and was selected over other related scales because it includes a mix of positive and negative items and has high internal consistency (Cronbach's alpha of .81 in prior research and .63 for the In-Depth Study sample.) The

author's work (Pearlin and Schooler, 1978) showing the relationship of the Mastery Scale to stresses of parenting and family life provides evidence of the scale's construct validity.

The scale consists of seven items such as "There is really no way I can solve some of the problems I have" and "I can do anything I really set my mind to do." The respondent is asked to rate each item on a four-point scale where "4" indicates "strongly agree" and "1" represents "strongly disagree." Scores were reversed for those items stated negatively, in order to create an average score where "4" indicates a sense of mastery.

Parents' depression was assessed by the Center for Epidemiologic Studies Depression Scale (CES-D) developed by Radloff (1977). This instrument is one of the most frequently used measures of depression cited in the psychological literature. The items were designed for use in general population surveys as a short self-report measure. The 20 items on the scale, which represent a subset of those previously validated on longer depression scales, have high internal consistency as indicated by a Cronbach's alpha of .90 in previous research (Hall et al., 1985) and .89 in the In-Depth Study. Moderate test-retest correlations of .51 to .67 have been reported when the scale is administered after two to eight weeks (Radloff, 1977). The construct validity of the scale has been demonstrated by correlations of .49 to .85 with clinicians' ratings and correlations of .72 to .84 with longer self-report scales used with psychiatric and general populations (Weissman et al., 1977).

Items on the CES-D include statements such as "I felt that everything I did was an effort," "I had crying spells," and "I enjoyed life." Respondents were asked to indicate how often they experienced each feeling during the past week. Items are rated on a four-point scale where "0" indicates "rarely or none of the time -- less than one day" and "3" reflects "most or all of the time -- 5-7 days." Positive items were reversed so that a total score could be computed, which ranges from 0 to 60. A total score of 16 or higher is considered to be indicative of high depressive symptoms (Hall et al., 1985).

Effects on Personal Skills

Data from the In-Depth Study showed no significant program effects on parents' personal skills, although the prevalence of depressive symptoms among adults in both Even Start and the control group is noteworthy.

Effects as Measured by the In-Depth Study. Exhibit 10.1 presents pretest scores and gains at the second posttest on the Pearlin Mastery Scale and CES-D for Even Start and control parents. There are no significant program effects on either measure. For the CES-D, both the average total score and the percentage of adults with high depressive symptoms are shown. At the In-Depth Study pretest, 46 percent of Even Start parents and 39 percent of control parents had scores above 16, indicating high depressive symptoms. By the second posttest, both groups improved slightly. However, there is no significant difference in the gains for Even Start compared to gains for the control group. Depression levels have proven difficult to change with this type of program. The national

Exhibit 10.1

Effects on Parents' Personal Skills: Results from the In-Depth Study

Parenting Variable	Even Start (n = 80)		Control (n = 71)		Program Effect (Effect Size)
	Pretest Mean (s.d.)	Gain	Pretest Mean (s.d.)	Gain	
Pearlin Mastery[a]	2.9 (0.6)	0.01	2.9 (0.6)	0.22*	-0.21 (.36 s.d.)
CES-D Total[b]	15.0 (11.6)	0.16	15.0 (12.5)	-0.58	0.74 (.06 s.d.)
High Depressive Symptoms[c]	46.3% (50.1%)	-2.5%	39.4% (49.0%)	-4.2%	1.7% (.03 s.d.)

Exhibit reads: At pretest, 46.3 percent of Even Start perents reported high depressive symptoms.

*Score represents average across seven items rated on four-point scale, where "4" indicates more positive behavior or attitudes.
[b]Scores represent frequency of 20 depressive symptoms rated on three-point scales.
[c]Percentages represent proportion of parents scoring 16 or higher on CES-D total.

CCDP evaluation (St.Pierre, et al., 1994) reported no significant effect of the program using the same measure of depressive symptoms.

In spite of the absence of program effects, it is interesting to note the proportion of adults in both groups who report depressive symptoms. These results are similar to those reported by Hall and her colleagues (1985), who found that 48 percent of low-income mothers of young children had scores above the cut-off for the CES-D.

Home Learning Environment

The NEIS instruments and the In-Depth Study parent interview each include several questions about parents' interactions with their children at home and the extent to which the home environment is conducive to young children's growth and development.

Description of the Measures

Information about parenting and the home environment comes from in-person parent interviews collected as part of the NEIS and the In-Depth Study. The questions were drawn from three existing instruments:

- **Home Observation for Measurement of the Environment (HOME).** The HOME Inventory (Caldwell & Bradley, 1984) has been used to measure the impact of parent training and education and to assess the quality of the home environment and mother-child relationship in the National Longitudinal Study of Youth (NLSY). Questions on reading activities and toys parents provide for learning were adapted for the Even Start evaluation.

- **High/Scope Home Environment Scale (H/SHES).** A structured parent interview was developed by the High/Scope Educational Research Foundation to assess parenting and parent-child interactions for the National Home Start evaluation (High/Scope Educational Research Foundation and Abt Associates Inc., 1975). Questions were drawn from this instrument for Even Start in four categories of activities: books and reading, play materials available in the home, parent teaching, and participating in learning activities.

- **Parent as a Teacher (PAAT).** The Parent as a Teacher (PAAT) self-rating scale was developed by Strom (1984) to assess parents' attitudes toward their children and to determine feelings and values concerning children's behaviors. This instrument was used in the evaluation of Project Giant Step (Layzer, Goodson, & Layzer, 1991) in New York City, a preschool program for disadvantaged families. For the NEIS, questions were selected from two subscales: play -- understanding the developmental function of play and willingness to participate in play with the child, and teaching -- understanding the learning process in young children and confidence in the parent's role as a teacher. For the In-Depth Study, two subscales were added: creativity -- parents' accept creative functioning and encourage its development, and frustration -- absence of frustration or irritation with child's demand for attention.

The parent interview developed for the In-Depth Study was purposefully designed to include the same questions as the NEIS while adding questions about parent-child activities outside of the home and family rules. These items were added because research with low-income families (e.g., Snow et al., 1991) suggests that homes associated with poor school performance often lack structure and supervision. In addition, children from low-achieving homes frequently lack the opportunities that middle-class children have for experiences and interactions outside of their families that can afford opportunities for learning (Cochran and Brassard, 1979).

The home environment items on the parent interviews ask parents either to indicate the frequency of their own or their child's behaviors or to rate their agreement with statements about child development. In most cases, there are several behaviors or statements for each construct that we are interested in measuring. For example, the question about play materials in the home lists 12 toys or materials and parents are asked to indicate which ones are available in their home. For the analyses, composite scores

were used rather than individual items, in order to handle missing data and increase the reliability of the scores. For items scored on three- or five-point scales, composite scores were based on an average across individual item responses. For items scored yes or no, composite scores reflect the percentage of positive responses.

Exhibit 10.2 describes these composite scores and presents the internal consistency of the composite scores from the NEIS and the In-Depth Study data. The internal consistency, based on Cronbach's alpha coefficient, is a measure of the extent to which responses to individual items are correlated to the total score. Internal consistencies of .60 or .70 are considered to be moderate, and coefficients above .80 indicate a highly reliable composite score. In general, the reliabilities for the In-Depth Study composites are lower than those for the NEIS because of smaller sample of respondents.

Nevertheless, most of the coefficients exceed .60, indicating moderate to good internal consistency.

Two individual items about the home environment also are included in the parent interviews from the NEIS and the In-Depth Study. These include:

- **Story reading**: the frequency with which the parent reads to their child, rated on a five-point scale from never (1) to every day (5).

- **Books in the home**: the number of books in the home for the child to look at or read, categorized as none, one-two books, three-nine books, or more than ten books.

Effects on Home Learning Environment

Overall, data from the NEIS and In-Depth Study point to few significant program effects in this area. Data from the NEIS show statistically significant gains on most of these measures; however, the effect sizes are generally small. In the In-Depth Study, program families show gains on some measures, but gains are also seen among control group families.

Effects as Measured in the In-Depth Study. Exhibit 10.3 presents the results from the In-Depth Study on the home environment measures. The one statistically significant program effect is seen for the number of reading materials in the home. This variable measures the number of different types of reading materials in the home (e.g., books, magazines, newspapers). Even Start families show a 17 percent gain from pretest to second posttest, which is a statistically significant difference. In contrast, control families exhibit a six percent increase, which is not significant. The larger gain for Even Start families translates into a statistically significant program effect that corresponds to an effect size of .40 standard deviation units. This is a moderate gain in educational or social programs.

Exhibit 10.2

Description and Reliability of Home Environment Composite Scores

Composite Score	Description	Response Choices	Internal Consistency[a]	
			NEIS	IDS
Learning activities	Activities that can be used to teach or reinforce cognitive skills such as finding food on store shelves or sorting clean clothes (5 items on NEIS; 9 on IDS)	1 Never 2 Once or twice 3 On a regular basis[b]	.73	.67
Reading materials	Reading materials found in the home (5 items) such as magazines and newspapers	1 No 2 Yes	.72	.50
Play materials	Materials found in the home that children can play with such as scissors, paints or puzzles (12 items on NEIS, 13 on IDS)	1 No 2 Yes	.77	.68
Teaching child	Things parent has helped child learn during the past month such as nursery rhymes and colors (11 items on NEIS, 7 on IDS)	1 No, did not help 2 Yes, helped	.91	.61
Talk with child	Topics parent have discussed with child (8 items) such as school activities or a television program	1 Never 2 Rarely, if ever 3 Once/twice a month 4 Once/twice a week 5 Daily	.93'	.65
Family rules	Extent to which family has rules for child's behavior (7 items) such as amount of television or helping with chores	1 Not at all like family 2 Somewhat like family 3 Very much like family	NA	.68
Activities with child	Parent-child activities outside of home in the past month (7 items) such as going to a park or grocery store	1 Not at all 2 Once or twice 3 Once a week 4 Several times a week 5 Almost every day	NA	.49
Parent as a Teacher	Agreement with statements that reflect how children learn or the parent's role as a teacher (14 items on NEIS; 28 in IDS)	1 Disagree strongly 2 Disagree somewhat 3 Agree somewhat 4 Agree strongly	.70	.74

[a]Cronbach's alpha ranges from 0 to 1.0 and indicates the relationship between individual items and composite scores.
[b]Response choices were extended to a five-point scale on IDS measure: never, once or twice, at least once/week, 2-3 times per week and daily.

Exhibit 10.3

Effects on the Home Learning Environment: Results from the In-Depth Study

Home Environment Variable	Even Start (n = 84)		Control (n = 73)		Program Effect (Effect Size)
	Pretest Mean (s.d.)	Gain	Pretest Mean (s.d.)	Gain	
Learning activities[a]	3.4 (.72)	.12	3.7 (.76)	.23*	-.10 (.14 s.d.)
Story reading[a]	3.5 (1.2)	-.07	3.3 (1.2)	-.17	.10 (.08 s.d.)
Books in home[a]	3.4 (.74)	.13	3.2 (.85)	.26*	-.13 (.15 s.d.)
Reading materials[b]	54.2% (23.5)	16.9%*	55.8% (26.2)	6.4%	10.5%* (.40 s.d.)
Play materials[b]	58.0% (18.0)	11.5%*	56.2% (19.6)	9.3%*	2.2% (.11 s.d.)
Teaching child[b]	73.1% (22.6)	5.5%	69.2% (20.9)	4.4%	1.1% (.05 s.d.)
Talk with child[a]	3.8 (.64)	.15*	3.7 (.76)	.24*	-.09 (.12 s.d.)
Parent as a Teacher[a]	3.1 (.34)	.03	3.0 (.36)	.02	.01 (.03 s.d.)
Family rules[a]	2.5 (.35)	.19*	2.7 (.38)	.06	.13 (.34 s.d.)
Activities[a]	2.3 (.48)	.01	2.2 (.46)	.11	-.09 (.19 s.d.)

Exhibit reads: At pretest, Even Start parents reported having 58 percent of the play materials listed on the parent interview.

* $p < .05$
[a]Based on three- or five-point scale.
[b]Score reflects percentage of materials or activities for child.

There are statistically significant differences between the pretest and second posttest for both Even Start and control group parents on a few other variables. For example, on play materials in the home and talking with child at home the Even Start and control groups each gain a significant amount from pretest to second posttest. Because both groups gain roughly comparable amounts, there are not any statistically significant program effects for these variables.

Effects as Measured by the NEIS. Exhibit 10.4 presents the results on the home environment measures from the NEIS. The gain from pretest to posttest is statistically significant for all of these measures. This is partly due to the large number of adults in the NEIS database. When the effect sizes are considered, the gains range from small to moderate in size.

In order to explore the relationship between gains seen on these parenting measures and participation in Even Start parent education, gains were calculated separately for three levels of parent education attendance, controlling for pretest scores on the parenting

Exhibit 10.4

Effects on the Home Learning Environment: Results from the NEIS

Measure	Number of Adults	Average Pretest	Standard Deviation	Gain	Effect Size
Learning activities[a]	4,401	2.0	0.59*	.27*	.46
Story reading[a]	4,379	3.4	1.25	.36*	.28
Books in home[a]	4,372	3.4	0.87	.27*	.31
Reading materials[b]	4,129	48.2%	26.1	6%*	.23
Play materials[b]	4,164	54.2%	23.8	15%*	.63
Teaching child[b]	4,062	67.5%	26.7	12%*	.44
Talk with child[a]	4,352	2.9	1.34	.54*	.40
Parent as a Teacher[a]	4,213	3.3	0.39	.07*	.02

Exhibit reads: Even Start parents scored 2.0 at pretest on the Learning Activities scale.

* $p < .001$.
[a]Based on three- or five-point scale.
[b]Score reflects percentage of materials or activities for child.

measures and the age of the child (Exhibit 10.5). The gains for adults who participated in more parenting education are significantly higher, but not importantly larger, than for parents with more minimal participation levels on all indicators. Exhibit 10.5 also shows that the effect sizes for these indicators are small to moderate for all except the "play materials" scale.

Discussion of Effects on the Home Learning Environment. The Even Start effects we observe on the home environment measures are small at best. There are several reasons why these findings may be weaker than those observed in adult education or early childhood education. First, there are few models to guide Even Start projects in developing effective instructional approaches to improving parenting skills. Second, the data shown earlier in this report indicate that, on average, participants receive much less parenting education than literacy training. The research literature concurs that the outcomes of parenting education are particularly difficult to assess and there is little

Exhibit 10.5

Gains on Home Environment Measures in the NEIS by Hours of Parenting Education

Measure	Hours of Parenting Education	Number of Adults with Matched Scores	Average Pretest	Average Gain	Effect Size
Learning activities	1-50 hours	2,553	1.99	.24	.40
	51-150 hours	1,351	2.01	.31	.53
	over 150 hours	511	2.03	.31	.53
Story reading	1-50 hours	2,553	3.38	.33*	.26
	51-150 hours	1,339	3.55	.33*	.27
	Over 150 hours	508	3.48	.44*	.37
Books in home	1-50 hours	2,544	3.34	.27*	.31
	51-150 hours	1,336	3.42	.29*	.35
	Over 150 hours	507	4.42	.32*	.36
Reading materials	1-50 hours	2,392	1.49	.05*	.19
	51-150 hours	1,269	1.49	.08*	.32
	Over 150 hours	479	1.49	.10*	.38
Play materials	1-50 hours	2,391	1.56	.13*	.54
	51-150 hours	1,292	1.55	.16*	.67
	Over 150 hours	499	1.55	.18*	.78
Talk with child	1-50 hours	2,531	2.94	.43*	.31
	51-150 hours	1,343	2.93	.77*	.60
	Over 150 hours	510	3.14	.78*	.63
Parent as a Teacher	1-50 hours	2,448	3.33	.05*	.13
	51-150 hours	1,288	3.35	.08*	.20
	Over 150 hours	493	3.31	.15*	.37

Exhibit reads: Parents with more than 150 hours of parenting education scored 3.48 on the story reading item, compared with parents with 1-50 hours of parenting education who scored 3.38.

* $p < .001$.

consensus about the appropriate constructs and few psychometrically sound measures (Weiss and Jacobs, 1988).

A further consideration is that high pretest averages on some of the measures leave little opportunity to show growth. Parents in both the Even Start and control groups generally reported on the pretest that their child had participated in many learning activities at home, that there were many books in the home, and that they had done many things to help their child learn. It is possible that parents were trying to give socially acceptable answers and that the "right" answers to items were too transparent.

Parent-Child Reading Task

A Parent-Child Reading Task was designed specifically for the In-Depth Study to measure the parent-child interactions of Even Start participants and control families. The task consists of asking the parent to read a simple book to her child, while a trained observer uses a pre-coded rating form to record several aspects of parent-child interactions. The observation was developed to provide a direct measure of a shared literacy activity and parent-child interactions.

Description of the Measure

The task is based on research that stresses the importance of reading books for the literacy development of young children. Findings from various studies over the last two decades note that middle-class children who are read to understand and know more words (Chomsky, 1972), have increased language and reading growth (Ninic and Bruner, 1978), learn basic concepts about books (Sulzby, 1985; Snow and Ninio, 1986), and benefit additionally because adults' reading to children acts as "scaffolds" in emerging literacy development (Edwards, 1989). Other research documents the importance of the methods used by parents when they read aloud to their children. The manner in which parents read to children can inhibit or facilitate the child's interest and skill in reading (Lancy, 1988). The quality of the interaction surrounding parent-child reading has been found to shape early reading development more than merely the presence of books or storytime routine (Mason and Allen, 1986).

Further, parents' questioning strategies used when reading aloud to children may promote or limit the cognitive benefits of story book reading (Pellegrini et al., 1990). Heath (1983) has written of the importance that questioning plays in the development of school-type literacies in young children. In three communities she studied, only parents in the middle-class sample used the kind of cognitive questioning strategies that teachers commonly use in school-based instruction. She considers children who are not familiar with this cognitive approach to be at risk when confronted with the demands of formal schooling. Her sample included poor black families from a rural southern region, not unlike some of the Even Start sites.

Thus, the research indicates that one way that parents teach children is through the medium of story book reading as they question and comment on the text and pictures, and as they initiate and respond to the child's comments. The management of the story book session reveals much about the relationship, interaction, and teaching strategies that occur between the parent and child around a pleasurable task which, if effectively carried out, promotes literacy development.

Several criteria were used to select the book for this task:

- The book had to have a story line. Previous research indicates reading stories has stronger associations with children's reading and language development than looking at books or reading wordless picture books, alphabet books or nursery rhymes (Wells, 1985).

- The book had to be available in Spanish and English to ensure comparability of subject and difficulty of the story across language groups.

- The book had to have relatively easy vocabulary so that it would not be too difficult for low-literate parents.

- The book had to have based on subject matter appropriate for girls and boys, children from diverse cultures, and children living in urban and rural areas.

A book entitled *Three Billy Goats Gruff* was selected. It met all of the above criteria.

Parents were asked to read the book to their child during the testing/interview session for the In-Depth Study. The choice of the English or Spanish version of the book was left up to the parent. The interviewer told the parent that we were interested in learning how parents and children read together, and instructed the parent to read the book the way she usually would read to her child. The interviewer rated the parent's and child's behavior as they read the book.

The rating scale was developed to record parent-child interactions and the parent's approach to reading during the brief story book reading session. The rating scale is divided into two parts. On Part I, the interviewer scored the way the parent read the book (e.g., labeling pictures, asking questions of the child) as well as the child's response and behavior during the session (e.g., pointed to pictures, responded to parent's questions). These categories are adapted from a rating scale developed by Resnick and his colleagues (1987), based on videotapes of mothers reading to their young children, and modified by Edwards (1989). The items are scored as absent or present; counts of behavior were not recorded because pilot testing of the instrument indicated it was not feasible to categorize and keep a count of diverse behaviors during these relatively brief observations.

Part II of the coding scheme was filled out by the interviewer at the completion of the parent-child reading activity. These general ratings of the quality of the parent-child interaction and the parent's reading are adapted from work conducted by Lancy and Draper (1988). This section includes items rated on a three-point scale to describe the reciprocity and quality of parent-child interaction. Parent and child were rated separately on items such as physical contact and task engagement.

Interviewers were trained by using videotapes of several parent-child dyads reading *Three Billy Goats Gruff*. In addition, an administration manual provided a description and examples of each coding category. For the analysis, composite scores were created as more reliable indicators. Based on conceptual groupings of parents' behaviors assessed on Part I, two composite scores were created and then evaluated for internal consistency. Additional composite scores were created by aggregating child behaviors and the general affect scores. The composite scores from Part I of the rating scheme were created by totaling the number of different behaviors that occurred during the session. On Part II, composite scores were calculated as the average scoring across the three-point scales. Exhibit 10.6 presents the reliability coefficients for the composite scores and lists the individual items included. Reliabilities are quite good, ranging from .71 to .80 for the five composite scores.

Effects on the Parent-Child Reading Task

There are no significant gains for any of the indicators of parents' or children's behaviors in either Even Start or the control group, and no program effects.

Effects as Measured by the In-Depth Study. The pretest means and gains for the behavioral ratings and general affect ratings on the Parent-Child Reading Task are presented in Exhibit 10.7. Parents and children in both Even Start and the control groups tended to be rated lower at the second posttest than at pretest. These consistent negative results across groups call into question the utility of this new measure.

Parents' Expectations for their Children

Description of the Measures

Questions about parents' expectations for their children's school success were adapted from the parent interview designed by Abt Associates for use in Prospects, the national longitudinal study of Chapter 1 (Puma et al., 1993). In both the NEIS and In-Depth Study, parents were asked to rate how well they expected their child to do in school (from "very well" to "very poorly") and the likelihood that their child will graduate high school (from "very likely" to "probably won't graduate high school").

Exhibit 10.6

Composition and Reliability of Scores on Parent-Child Reading Task

Composite Score	Items	Internal Consistency Coefficients
Parent describes book to child[a]	Points to pictures or words; labels pictures; describes pictures or text; elaborates on pictures or text.	.71
Parent questions or responds to child[a]	Links pictures or story to child's life; asks child to identify pictures; repeats child's comments or words; elaborates on child's comments; responds to child's questions; asks comparative, inferential, or cause-and-effect questions.	.71
Child responds[a]	Points to pictures; labels or names picture; repeat words or elements of story; acts out or makes sound related to story; links story content or pictures to own life; responds to parent's questions; asks questions, makes comments related to book or parent's comments.	.74
Parent's general affect[b]	Task engagement; positive affect; interactive contact with child; physical contact with child; pace; control of book; reading fluency; reading delivery.	.80
Child's general affect[b]	Task engagement; positive affect; interactive contact with parent; physical contact with parent.	.75

[a]Each item in composite scored as present or absent.
[b]Each item in composite scored on three-point scale.

Exhibit 10.7

Effects on Parent-Child Reading Behaviors: Results from the In-Depth Study

Parent-Child Reading Behaviors	Even Start (n = 79)		Control (n = 71)		Program Effect (Effect Size)
	Pretest Mean (s.d.)	Gain	Pretest Mean (s.d.)	Gain	
Parent describes book[a]	2.1 (1.4)	-0.30	2.4 (1.4)	-0.28	-0.02 (.01 s.d.)
Parent questions or responds to child[b]	1.6 (1.6)	-0.57	1.9 (1.6)	-0.49	-0.08 (.05 s.d.)
Child responds[c]	2.7 (2.0)	-0.30	2.9 (2.0)	-0.15	-0.15 (.08 s.d.)
Parent's general affect[d]	2.3 (0.40)	-0.04	2.4 (0.39)	-0.03	-0.01 (.03 s.d.)
Child's general affect[e]	2.1 (0.50)	0.08	2.3 (0.50)	0.08	0.0 (--)

Exhibit reads: Even Start parents at pretest exhibited an average of 2.1 out of 4 behaviors related to describing the book to their child.

[a]Score represents occurrence of four parent behaviors.
[b]Score represents occurrence of six parent behaviors.
[c]Score represents occurrence of seven child behaviors.
[d]Score represents average of eight items rated on three-point scales, where "3" indicates positive behavior.
[e]Score represents average of four items rated on three-point scales, where "3" indicates positive behavior.

Effects on Parents' Expectations

The NEIS and In-Depth Study data each show significant gains and similar results for parents' expectations about their children's school success. However, the control group in the In-Depth Study also shows significant gains, and, thus, there is not a significant program effect on this variable.

Effects as Measured by the In-Depth Study. Exhibit 10.8 presents expectations for children among parents in Even Start and the control group. The gain seen in the control group is statistically significant. However, because the program group was slightly higher at the pretest, the two groups are quite comparable by the second posttest.

Parents in both Even Start and the control group, on average, report that their children are likely to graduate from high school. As Exhibit 10.8 indicates, there are no statistically significant differences from pretest to second posttest for either group, and no program effect.

Exhibit 10.8

Effects on Parent's Expectations for Their Child: Results from the In-Depth Study

Parent's Expectations	Even Start (n = 75)		Control (n = 58)		Program Effect (Effect Size)
	Pretest Mean (s.d.)	Gain	Pretest Mean (s.d.)	Gain	
How well child will do in school[a]	4.3 (0.84)	0.19	4.0 (0.82)	0.34*	-0.15 (.18 s.d.)
Likelihood of child graduating from high school[b]	3.7 (0.57)	0.06	3.6 (0.70)	0.10	-0.04 (.06 s.d.)

Exhibit reads: Even Start parents at pretest rated the likelihood that their child will graduate from high school as 3.7 out of a possible 4.

[a]Item rated on five-point scale where "5" equals "very well" and "1" indicates "very poorly".
[b]Item rated on four-point scale where "4" indicates "very likely" and "1" indicates "probably will not graduate from high school.

Effects as Measured by the NEIS. The results from the NEIS are presented in Exhibit 10.9. The average expectations and the magnitude of the gain are almost identical to those seen in the IDS. Given the sample sizes here, these small gains are statistically significant for the NEIS data.

Conclusions about Effects of Even Start on Parenting Skills

This evaluation measured effects on parenting skills in four areas: (1) parents' personal skills, (2) the home learning environment, (3) parent-child reading, and (4) parents' expectations for their children. There are few program effects on these measures.

Parents' personal sense of well-being, as measured by a sense of mastery and lack of depression, has been cited in the research literature as related to the nature and quality of parent-child and family relationships. Data from the In-Depth Study did not reveal any effect of Even Start on these variables. The overall prevalence of depressive symptoms was high among this group of families (46 percent of Even Start parents were classified as "depressed" at the time of the pretest), although similar to those reported with other low-income populations. It is possible that these psychological problems are difficult to ameliorate with programs such as Even Start, or at least difficult to change in the short-term. Perhaps with continued gains in other areas such as educational attainment and employment, parents will express different opinions about their sense of mastery and happiness. It also is possible that projects have not focused on these problems and may

Exhibit 10.9

Parent's Expectations for their Child: Results from the NEIS

Parent's Expectations	Number of Adults	Average Pretest	Standard Deviation	Gain	Effect Size
How child will do in school[a]	3,884	4.2	.77	.16*	.20
Likelihood of child graduating from high school[b]	4,219	3.7	.54	.09	.10

Exhibit reads: Parents are pretest rated the likelihood that their child will graduate from high school as 3.7 out of a possible 4.

[a]Item rated on five-point scale where "5" equals "very well" and "1" indicates "very poorly".
[b]Item rated on four-point scale where "4" indicates "very likely" and "1" indicates "probably will not graduate from high school.
* $p < .05$.

be able to help parents through increased collaboration with medical and mental health agencies.

Even Start appears to be having a significant impact in only one area of the home environment: the number of reading materials in the home. While all variables on the NEIS show a significant change from pretest to posttest but small effect sizes, this is the one variable where there also is a significant positive effect seen in the In-Depth Study. Since this is one measure out of many, this finding should be interpreted with caution. However, many Even Start projects make a concerted effort to increase the number of books, magazines and newspapers in participants' homes, either through loans or free donations of reading materials.

There are no significant program effects on the Parent-Child Reading Task, which was developed as a new measure to extend the information collected from the In-Depth Study beyond the traditional paper-and-pencil tests. In addition, Even Start project directors urged us to collect some direct assessment of parent-child interaction and a shared literacy activity. However, the negative changes recorded from pretest to second posttest on this measure raise questions about the utility of the rating scale in its present format.

One shortcoming of the Parent-Child Reading Task may be that it is not sensitive enough to differences between parents to show changes over time. The choice to make the coding a simple yes/no check of behaviors rather than a count of the number of occurrences of a behavior means that we cannot differentiate parents who display multiple examples of positive behaviors from those who exhibit the behavior only once. Much of the prior research in this area used videotapes and coded mother-child behaviors from the tapes. We felt that this would be a costly approach and also would make some parents and children feel uncomfortable.

Another difference between the current measure and the research tools on which it was based is the purpose of the observation. Most of the prior research studies (e.g., Lancy and Draper, 1988; Pellegrini et al., 1990; Resnick et al., 1987) were attempting to describe the content and quality of parent-child reading in order to determine whether mothers incorporated teaching strategies when they read to their child or to relate parents' reading strategies to the acquisition of the child's reading abilitv. Thus, using this type of instrument to assess program effects is a new application that may require more differentiated coding schemes.

Chapter Eleven

Effects of Even Start Projects on Families

This section presents results from the In-Depth Study on the social supports and financial resources available to Even Start families. Information on employment status from the NEIS and In-Depth Study also is reported. By providing support services to participating families and engaging parents in program activities, it is hypothesized that Even Start may help families develop a wider social network and greater access to social services. In addition, adult education services could enable parents to find work or change to higher paying jobs, with the long-term effect of increasing income from wages and reducing reliance on public assistance. In addition, this section describes results from focus groups with Even Start parents about their perceptions of the program's impact on their families. Subsections include:

- Social Support for Families
- Family Resources
- Employment Status
- Parents' Perception of Program Impacts
- Conclusions about Effects of Even Start on Families

Social Support for Families

The term "social support" refers to the help and support offered to individuals and families by their relatives, friends and neighbors. The availability of this support can affect one's psychological well-being by providing direct assistance as well as serving as an informal referral source to community services (Gottlieb, 1976). Adequate social support also has been linked to outcomes for children. The availability of a support network for parents influences children both in terms of the amount of emotional energy that parents have for their children as well as the increased opportunity for interactions and experiences outside of the home that provide sources of cognitive and social stimulation for children (Cochran and Brassard, 1979).

Description of the Measure

The Inventory of Socially Supportive Behaviors (ISSB), developed by Barrera, was included in the parent interview for the In-Depth Study to obtain information about parents' social supports. This measure was chosen over other measures of social support because it includes concrete behaviors in addition to emotional support, uses clear and simple language, and assesses the frequency of support rather than perceived satisfaction with available supports.

The ISSB was designed to assess various types of assistance that people have available in everyday life. The scale includes 40 behaviors such as: provided you with a place where you could get away for a while, provided you with transportation, told you who you should see for assistance, and loaned you over $25. Respondents are asked to rate the frequency of each event in the past month on a five-point scale from "not at all" (1) to "almost every day" (5). The measure is scored by creating either a total additive score across all items or an average score if ratings are missing from some items.

In previous research, the measure has demonstrated adequate psychometric properties. The test-retest reliability for the total score was .88 when the measure was administered twice over a two-day period (Barrera, 1981). The internal consistency of the total score has generally been above .90 (Barrera, no date). For the In-Depth Study, the ISSB scale was shortened to 27 items to reduce respondent burden. The internal consistency, as measured by Cronbach's alpha, was .92 for the total score based on these 27 items.

Effects on Social Support

There is no program effect on the social support scale in the In-Depth Study. This scale was not part of the NEIS. Exhibit 11.1 presents the pretest and second posttest scores on the ISSB. Parents in Even Start and the control group gave very similar ratings to the frequency of social support, and there are no statistically significant differences between the groups. The average scores from both the Even Start and control groups are somewhat lower than those reported in the research literature (Barrera, no date) in both pregnant teens (mean: 2.6) and female college students (mean: 2.5).

Family Resources

A number of researchers have discussed the impact of limited financial resources on family dynamics, parenting, and child growth and development. Families living in poverty are more likely to experience greater and more chronic stress than middle or upper income families; in addition, the incidence of major stresses, such as inadequate housing and lack of money for food, creates psychological stress that affects parent-child and parent-parent interactions within the family (Parker et al., 1988). As a result, poor families are more likely to exhibit punitive parenting styles than more economically advantaged families (McLoyd, 1990).

Description of the Measures

Information about family resources comes from three areas of the parent interview: a question about the major sources of household income, a question categorizing the level of family income, and a set of questions about the adequacy of family resources.

The family resource scale is an adaptation of an instrument developed by Leet and Dunst for use in family intervention programs (Dunst et al., 1988). It is one of the few

Exhibit 11.1

Social Support: Results from the In-Depth Study

	Even Start (n=81)		Control (n=73)	
	Mean	(s.d)	Mean	(s.d)
Inventory of Socially Supportive Behavior[a]				
Pretest	2.4	(0.9)	2.2	(0.8)
Second Posttest	2.3	(0.7)	2.3	(0.8)
Gain	-0.05		0.03	
Program Effect (Effect size)		-0.08 points (.10 s.d.)		

Exhibit reads: Even Start parents scored an average of 2.4 out of 5.0 at pretest on the ISSB scale.
[a]Score represents average across 27 items rated on five-point scale, where "5" indicates greater frequency of social support.

measures we have seen that tries to assess the adequacy of resources for basic necessities (e.g., food for two meals a day, indoor plumbing, and owning or having access to a telephone). The scale includes 25 items which respondents are asked to rate on a five-point scale from "not at all adequate" (1) to "almost always adequate" (5). An average rating across the 25 items was created as a composite score.

In prior research, the measure has shown adequate psychometric properties. The authors report a Cronbach's alpha of .92, a split-half reliability of .95 corrected for length using the Spearman-Brown formula, and a test-retest reliability of .52, based on administering the scale to 45 individuals on two occasions two months apart (Dunst and Leet, 1987). In the In-Depth Study, the internal consistency of the composite score was .85.

Effects on Family Resources

There is a statistically significant increase in the adequacy of family resources reported by Even Start families; however, control group families also gained a small amount and there is no significant program effect. There are no program effects on income or reliance on government assistance. The lack of effects on income is to be expected, since changing income is a relatively long-term outcome for Even Start.

Exhibit 11.2 presents the results on the Family Resource Scale for Even Start and the control group. Both groups reported an average of 3.6 out of a possible 5.0 on the

Exhibit 11.2

Adequacy of Family Resources: Results from the In-Depth Study

	Even Start (n=81)		Control (n=73)	
	Mean	**(s.d)**	**Mean**	**(s.d)**
Family Resource Scale[a]				
Pretest	3.6	(0.6)	3.6	(0.6)
Second Posttest	3.7	(0.6)	3.7	(0.5)
Gain	0.12*		0.04	
Program Effect (Effect size)	0.08 points (.13 s.d.)			

Exhibit reads: Even Start families scored an average of 3.6 out of 5.0 at pretest on the Family Resources Scale.

[a]Score represents average across 25 items rated on five-point scale, where "5" indicates more adequate resources.

*$p < .05$.

pretest, indicating that they perceived their resources to be between "sometimes adequate" and "usually adequate" at the time they entered Even Start. This suggests that parents did not perceive a large problem with a lack of resources. In both groups, the average rating of the adequacy of family resources rose slightly from pretest to second posttest. This gain was statistically significant for the Even Start participants; however, the difference was not large enough when compared to the gain among the control group to show a statistically significant program effect.

Exhibit 11.3 shows the percentage of families at pretest and posttest whose household income was less than $10,000, and who receive government assistance. While the percentage of Even Start families with income below $10,000 dropped from 72 percent at pretest to 65 percent at the second posttest, control group families showed a similar decrease.

A second way to analyze these data is to focus on families whose income was below $10,000 at the pretest to see how many were able to increase their income above this level. Exhibit 11.4 shows that 20 percent of Even Start families and 21 percent of control families reported in.. eases that moved their income from under to over $10,000. The difference between groups is not statistically significant.

The percentage of Even Start families on government assistance remained fairly constant from pretest (48 percent) to second posttest (47 percent), while the percentages among the control group dropped slightly from 45 percent at pretest to 41 percent at the second posttest (see Exhibit 11.3). These differences are not statistically significant. Exhibit 11.5 shows the percentage of families in each group who were able to get off of public assistance in Even Start (26 percent) and the control group (22 percent). Once again, these differences are not statistically significant.

Employment Status

Although Even Start is not primarily an employment and training program, the adult education component of the program could effect changes in parents' employment status by increasing their skill levels and employability.

Description of the Measure

The parent interview for the NEIS and the In-Depth Study asked respondents to indicate their current employment status as working full-time, working part-time, or not working. For the NEIS, these questions were asked at program entry and again either at the end of the program year or at exit. In the In-Depth Study, employment status was asked at the pretest, first posttest and second posttest. The information was specific to the adult targeted for the evaluation and does not necessarily reflect whether anyone in the household was employed.

The analyses focused on the percentage of adults who were not employed versus those working part-time or full-time. We aggregated data about part-time and full-time employment for a number of reasons. First, Even Start project directors pointed out that for mothers of young children, part-time work is a positive outcome. Also, part-time employment in a job with higher wages can be an improvement over a full-time but low-paying job.

Exhibit 11.3

Financial Resources: Results from the In-Depth Study

	Even Start (n=84)	Control (n=75)
Household Income Less than $10,000		
Pretest	72.3%	72.6%
Second Posttest	65.1%	64.4%
Gain	7.2%	8.2%
Program Effect (Effect Size)	-1.0% (.01 s.d.)	
Receiving Government Assistance		
Pretest	48.2%	45.1%
Second Posttest	46.9%	40.9%
Gain	1.3%	4.2%
Program Effect (Effect Size)	-2.9% (.06 s.d.)	

Exhibit reads: 72 percent of Even Start parents had household incomes less than $10,000 at pretest.

Exhibit 11.4: Percentage of Families Who Increased Income Above $10,000 by Posttest: In-Depth Study

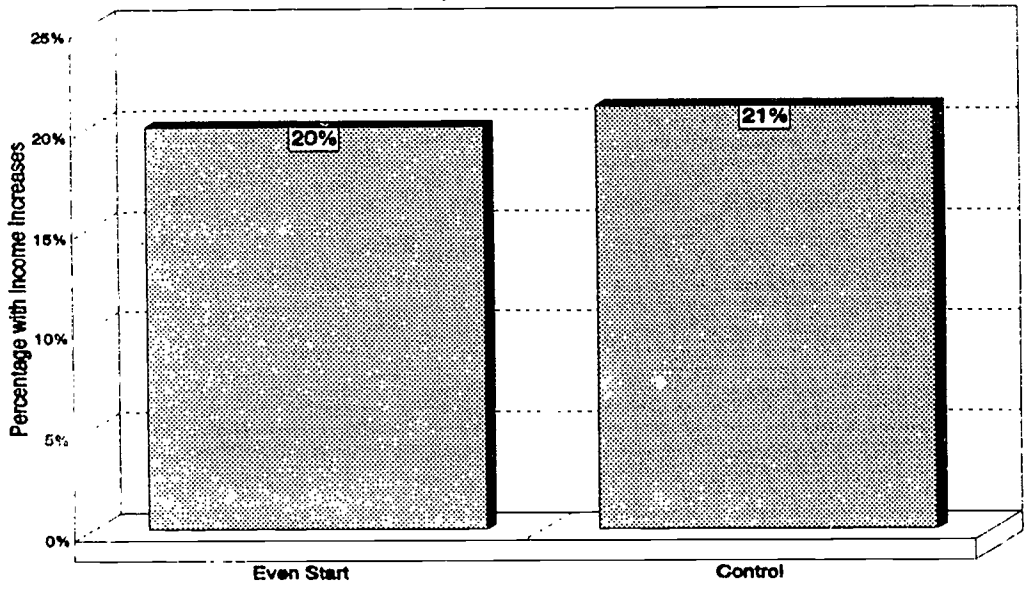


Exhibit reads: Of those families whose household income was less than $10,000 at pretest, 20 percent of Even Start families and 21 percent of control families reported incomes above $10,000 at the second posttest.

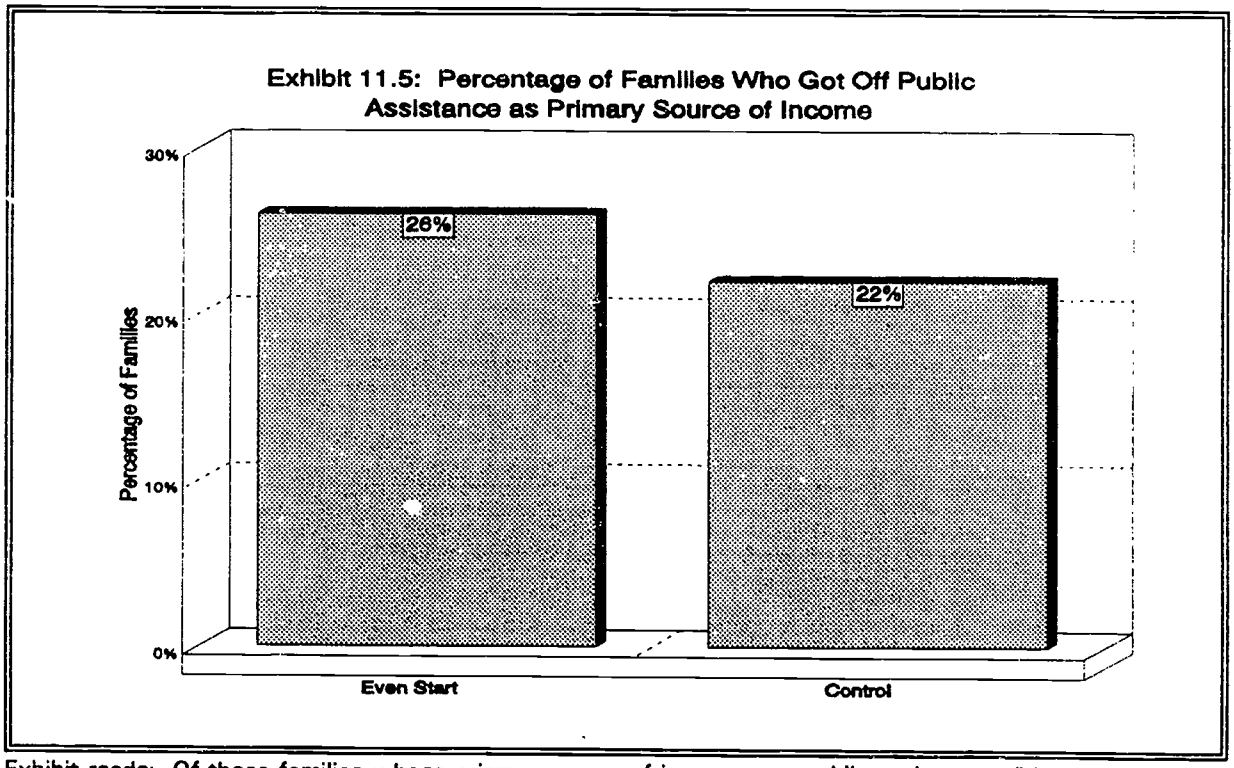


Exhibit reads: Of those families whose primary source of income was public assistance, 24 percent of Even Start families and 16 percent of control families no longer relied solely on public assistance by posttest.

Effects on Employment Status

Based on results from the In-Depth Study and the NEIS, Even Start does not appear to have a significant effect on participants' employment status.

Effects as Measured by the In-Depth Study. Exhibit 11.6 shows the percentage of parents in the Even Start and control groups who were employed at the pretest and second posttest. While some adults in each group who were not employed at pretest became employed by the second posttest, there is no significant program effect. When the sample is restricted to just those adults who were not employed at pretest, fewer adults in Even Start (14 percent) than the control group (22 percent) found work by the second posttest (Exhibit 11.7). This may be due to the greater likelihood that Even Start adults are involved in adult education programs or other training and are not yet seeking employment. Once again, this difference is not statistically significant.

Effects as Measured by the NEIS. Exhibit 11.8 presents information about the percentage of adults who were not employed at program entry for the total group of respondents and for subgroups of participants. Approximately 78 percent of the adults participating in Even Start were not employed at pretest. Nearly 13 percent of these participants found employment by the end of the program year or by the time that they exited from Even Start. The results are fairly consistent across subgroups of participants.

Exhibit 11.6

Employment Status: Results from the In-Depth Study

	Even Start (n = 84)	Control (n = 73)
Employed Part-Time or Full-Time		
Pretest	17.6%	20.5%
Second Posttest	22.4%	30.1%
Gain	4.8%	9.6%
Program Effect	-4.8%	

Exhibit reads: 17.6 percent of Even Start parents were employed either part-time or full-time at pretest.

Exhibit 11.7: Percentage of Adults Not Employed at Pretest who Found Employment by Posttest

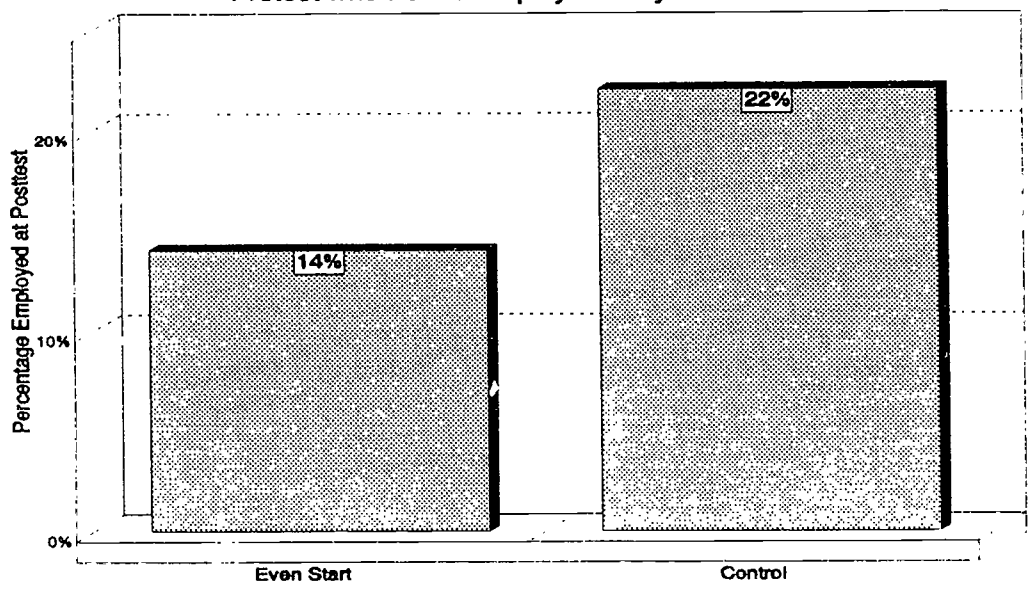


Exhibit reads: Of those adults who were not employed at pretest, 12 percent of adults in Even Start and 15 percent of adults in the control group were employed at the second posttest.

Exhibit 11.8

Employment Status: Results from the NEIS

Group	All Participants			Not Employed at Intake		
	Total Adults	Not Employed at Intake		Total Adults	Found Employment	
		N	%		N	%
Age at Intake						
Under 21	1,764	1,563	88.6	1,453	154	10.6
21-25	4,417	3,661	82.9	3,430	436	12.7
26-30	4,163	3,194	76.7	3,019	419	13.9
31-35	2,328	1,660	71.3	1,555	219	14.1
36-40	1,137	812	71.4	765	97	12.7
Over 40	789	577	73.1	537	52	9.7
Gender						
Male	1,284	602	46.9	544	115	21.1
Female	13,369	10,869	81.3	10,220	1,265	12.4
English is primary language						
No	4,018	3,115	77.5	2,884	398	13.8
Yes	10,874	8,566	78.8	8,073	990	12.3
Ethnic background						
Asian	482	360	74.7	312	25	8.0
African American	4,805	3,804	79.2	3,496	379	10.8
Hispanic	3,783	2,948	77.9	2,799	391	14.0
Native American	795	672	84.5	648	93	14.4
White	5,038	3,883	77.1	3,726	508	13.6
Attained GED while in Even Start						
No	11,094	8,997	81.1	8,384	979	11.7
Yes	1,006	809	80.4	793	144	18.2
TOTAL	**15,191**	**11,910**	**78.4**	**11,169**	**1,414**	**12.7**

Exhibit reads: At intake, more than three quarters (78.4 percent) of Even Start adults targeted for the evaluation were not employed. Of those who were not employed, 12.7 percent found part-time or full-time employment while participating in Even Start.

Parents' Perceptions of Program Impacts

As part of the In-Depth Study, parents in Even Start were asked for their own assessment of the program's impact.

Description of the Measure

During annual site visits to the ten In-Depth Study projects, Abt staff conducted focus groups with Even Start parents to obtain their views of the program. These discussions were held with approximately ten parents at each site. Project directors invited parents to take part in the focus group, but their participation was voluntary. Topics for the focus groups included the reasons why parents joined Even Start and the impact of the program on themselves and their family.

Perceived Effects on Adults

Parents described a number of positive effects of their participation in Even Start, including improved personal skills, increased parenting ability and learning gains. In some programs parents noted that the main reason they joined Even Start was for the adult education. Some parents were interested in preparing for the GED certificate, continuing their education or improving English proficiency. Others stated that education was a way to improve their lives. As one woman said, "I want to better myself, to take up a trade, to be a nurse's aide." Another parent indicated a desire to "do something with my life."

Participants commented that Even Start recognizes that the adult learners also are parents. One mother stated that she had once considered attending classes to prepare for the GED but because the program did not offer child care, she was not able to attend. Several women had dropped out of night school prior to joining Even Start; one of these woman indicated that she liked Even Start "because it was different from other school" experiences she had had either as a child or an adult. Several parents commented that having the early childhood services available was a plus for them as well as their children. For some it is the convenience, for others it is the safety--knowing where their children are and being able to check on them during the day eased parents' concerns.

Even Start participants also discussed the changes they experienced in their interactions with their children. Although most parents indicated that the parenting classes were not the main reason for joining the program, they now viewed this component as extremely important. Through the parenting classes and home visits, parents described being able to communicate more effectively with their children. The program also has helped them learn how to play with their children--to be creative with their children, to make games for their children, and to plan activities for their children at home.

Parents described being able to interact more positively with their children and deal with the stresses they feel as a parent without "exploding." Several parents spoke of having more patience with their children and using less physical punishment. One mother told

how she has learned not to criticize her children as much, but rather to give them praise; further, she felt that she has developed more realistic expectations about her children and herself.

A number of parents commented that they have higher personal goals and more self-esteem as a result of Even Start. One woman stated that before she joined the program, she viewed the GED as "working papers," but now she sees the certificate as "the first step towards a better life."

The program also has reduced the parents' sense of isolation and being "trapped at home with their children." Although some of the women knew each other before enrolling in the program, they had only limited interaction. As one mother said, "you can live right next door to someone and not know them." Now they check up on each other and visit or call if someone has missed class. Another mother commented that "for most of us, it's just us and our kids." Even Start has given them the opportunity to interact with other adults who have similar problems and experiences. As a result, participants feel better able to cope with life situations.

In several programs, participants described Even Start as their "family." In one project, parents gave staff high marks for being respectful and willing to do anything for the families--"we just pick up the phone and tell them we need help and they are there." In another site, parents told how staff treat them "as human beings without putting you down or judging you," but all the while "helping us in a new way of life." In a third site, parents pointed out that the friendly and supportive environment of the program allows parents to feel valued and know that their concerns are taken seriously.

Perceived Effects on Children

Parents were quite positive about Even Start's effects on their children. They reported that their children's attitudes toward reading and schooling had changed to excitement and eagerness to learn. Several parents cited specific skills that their children have learned, such as using scissors, learning the alphabet and the name of colors. Parents with older children stated that their younger children in Even Start are much better prepared for public school than their older siblings--they know how to take the bus, they can read, they speak English better and they are "just less afraid."

In addition to cognitive skills, improved verbal and social skills were reported by many parents. One mother stated that her child rarely spoke before he attended Even Start, and "now he talks constantly." Others commented that the program has helped their children to be less shy, to speak more clearly, and to separate more easily from their mothers. As one mother described it, " my child does more for himself in everything--in eating, in dressing himself...he isn't always hanging onto me anymore."

Parents reported that their children are now better behaved. One mother described her son's pre-Even Start activity level as similar to "a grasshopper," but now he is more calm and controlled. Parents also described their children as more helpful and cooperative at

home. The organizational skills that children learn at school (e.g., putting things back in their place) have carried over to the home as well.

Conclusions about Effects of Even Start on Families

The In-Depth Study included several measures of the effects of Even Start on participating families, including their perceived social support, adequacy of financial resources, income level and sources, and employment status. The NEIS instruments had questions about income and employment. Across these measures, gains from program entry to the end of the second program year are minimal. It is possible that these areas are difficult to change because they are affected by circumstances beyond the control of the program, such as the local economy and the availability of jobs. It is also likely that these indices will not show large changes in the short-run, but instead require longer interventions and other positive short-term impacts in order to achieve significant gains.

While there are few effects for families on these quantifiable variables, Even Start participants report quite a number of qualitative changes in their lives and the lives of their children. Listening to the personal stories of program participants, it becomes apparent that most of the changes in attitudes and skills that the parents see in themselves and their children are positive short-term impacts of the program. Parents describe themselves as moving toward their goals of an educational certificate, getting a job and being a better parent. Given the current status of the Even Start parents, it is reasonable that we do not yet see changes in the more distal outcomes of increased employment and income.

Chapter Twelve

Cost of Even Start

Even Start's budget has grown steadily since its inception, from $14.5 million in 1989 to an estimated $90 million in 1993. As Exhibit 1.1 showed, this increase has enabled Even Start to fund more projects each year. Data on federal costs and number of families served are available for all Even Start projects, while projects in the In-Depth Study portion of the evaluation participated in a special assessment of the federal and local costs of Even Start. While the In-Depth Study projects were not randomly selected, but they do represent a reasonable cross-section of fully functioning Even Start grantees. This section of the report includes discussions of:

- Cost per Participating Family
- Distribution of Total Cost by Function
- Project Variation in Federal Cost per Family

Cost Per Participating Family

Even Start projects engage in many functions including project administration and coordination, three core services, a range of support services, evaluation activities, recruiting, case management, and many others. One aim of this evaluation was to calculate the federal (Even Start) cost per family; a second purpose was to ascertain the full cost of all Even Start services, including federal Even Start funding, local matching funds, in-kind services or facilities, the value of other locally obtained core and support services, and other federal funding (e.g., the pro-rated cost of early childhood education obtained from Head Start or the pro-rated cost of adult basic education obtained from a local community college).

Exhibit 12.1 shows the federal cost for Even Start projects participating in the national evaluation for the first three years of program operations. The number of families and participants (adults and children) served increased greatly from 1989-90 to 1990-91, as would be expected given the increase both in number of projects funded and total federal dollars spent on the program. The number of projects in the evaluation remained constant from 1990-91 to 1991-92; however, the number of families and participants increased substantially once again (by 46 percent), indicating that projects were maturing and becoming more efficient.

Exhibit 12.1

Federal Cost for Even Start Projects, by Program Year

Measure	1989-90	1990-91	1991-92
Number of Projects	76	123	123
Total Grant Awards (millions)	$14.5	$24.2	$24.2
Average Grant Award	$190,789	$196,748	$196,748
Total Families Served	2,460	6,596	9,668
Average Number of Families	32	54	79
Total Participants Served	5,672	16,143	24,799
Average Participants Served	75	131	202
Federal (Even Start) Cost Per Family	$5,894	$3,669	$2,503
Federal (Even Start) Cost Per Participant	$2,556	$1,499	$975

Exhibit reads: The federal (Even Start) cost for each Even Start family was $2,503 during the 1991-92 program year.

The federal cost per Even Start family declined over time, from $5,894 in 1989-90 to $3,669 in 1990-91, and again to $2,503 in 1991-92[11]. The same pattern holds for the cost per participant--a decline from $2,556 in 1989-90 to $975 in 1991-92.

Data from projects participating in the In-Depth Study cost analysis show that Even Start projects obtain substantial amounts of support, in addition to their federal Even Start funds, in order to deliver appropriate services to participating families. As noted above, the federal (Even Start) per family cost was $2,503 in 1991-92. The In-Depth Study cost

[11]This calculation is based on total federal costs divided by the total number of families served and is appropriate for costing policy alternatives and making comparisons among federal programs. It also is possible to calculate the federal cost per family for a typical Even Start project--the mean cost per family is calculated for each project in the study and then an average of project means is computed. This approach gives equal weight to each project (rather than to each family), and yields a cost per family of $3,634 in 1991-92. The project-based cost per family is higher than the individual-based cost per family because large projects (which serve more families at a lower per-family cost) count no more than small projects (which serve fewer families at a higher per-family cost). This approach would be appropriate if the interest is in comparing costs across projects, or in determining which types of projects are most cost-efficient.

analysis found that local projects obtained additional funding of $1,352 per family, for a total of $3,855 per family (see Exhibit 12.2).

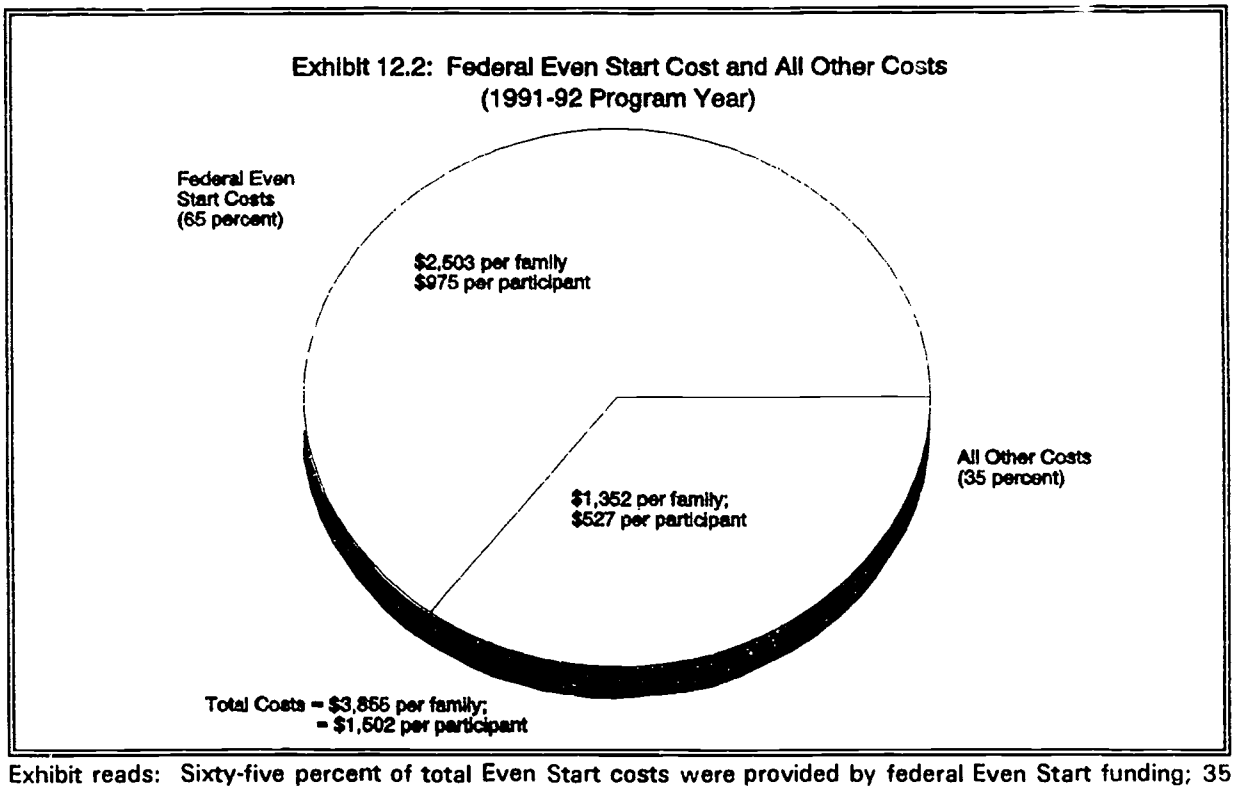


Exhibit reads: Sixty-five percent of total Even Start costs were provided by federal Even Start funding; 35 percent were provided by other sources including local matching, in-kind services or facilities, the value of other locally obtained core and support services, and other federal funding (e.g., the pro-rated cost of early childhood education obtained from Head Start).

Thus, federal Even Start funds comprise 65 percent ($2,503) of the total cost per family ($3,855), and other funds obtained locally (including local, state, and other federal) comprise 35 percent ($1,352) of the total cost per family. Alternatively, local projects are able to match 54 percent of their federal Even Start funds.

Distribution of Total Cost by Function

More than half (55 percent) of all Even Start costs were incurred in the provision of core services: 31 percent for early childhood education, 15 percent for adult education, and 9 percent for parenting education (Exhibit 12.3). An additional 9 percent was spent on the provision of support services which are designed to enable families to participate in core service activities. Thus, almost two-thirds (64 percent) of projects' funds were spent on the direct provision of services. Remaining funds were spent for program administration and coordination (14 percent), evaluation (10 percent), case management and recruiting (4 percent), and for a variety of other functions (8 percent) such as field trips, staff meetings, clean-up, and errands.

Exhibit 12.3: Distribution of Federal Even Start Dollars by Function (1991-92 Program Year)

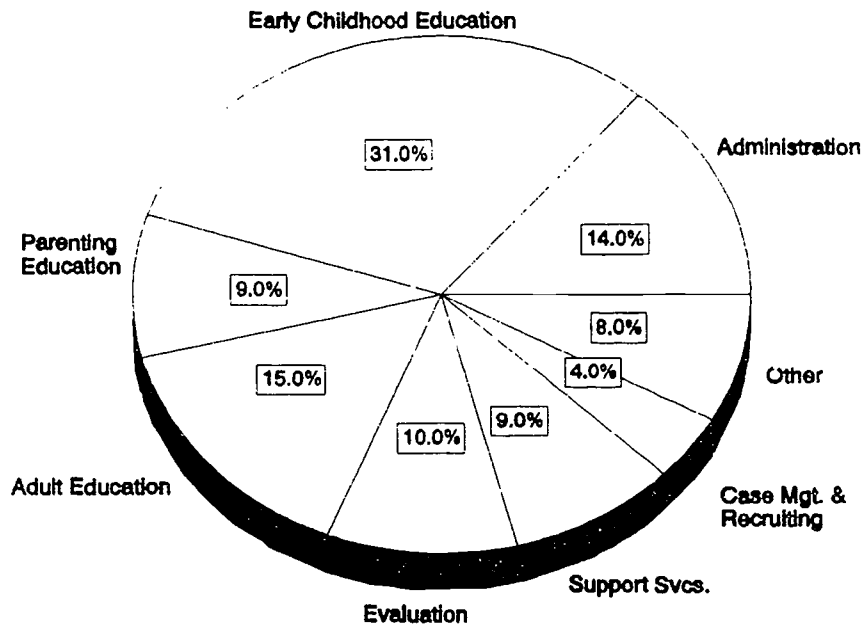


Exhibit reads: 31 percent of Even Start costs (both federal and all other) were incurred in the provision of early childhood education services.

Project Variation in Federal Cost Per Family

As with most variables investigated in this evaluation, there is great variation across projects in the amount of federal dollars spent on each family. Exhibit 12.4 shows a distribution of project-level per family costs.[12] Some projects spend relatively few federal dollars per family while other projects spent much more on a per family basis. Most projects spent between $1,000 and $5,000 federal dollars per family. However, six projects spent less than $1,000 per family, while three projects spent over $8,000 per family. Such wide variation in expenditures per family reaffirms that Even Start projects took very different approaches to organizing and implementing services. It also suggests that there are wide project-to-project differences in access to federal and non-federal resources outside of Even Start. For example, some projects used locally-available adult education and early childhood education services, while others had to provide those services using their federal Even Start funds.

Information on two project characteristics that are related to cost per family is shown in Exhibit 12.5. One variable that is related to federal cost per family is the locus of primary responsibility for providing adult education and early childhood education services. As

[12]The federal cost per family at the project level is calculated by dividing the total number of families participating in core services during a year by the total federal funds received by the project for that year.

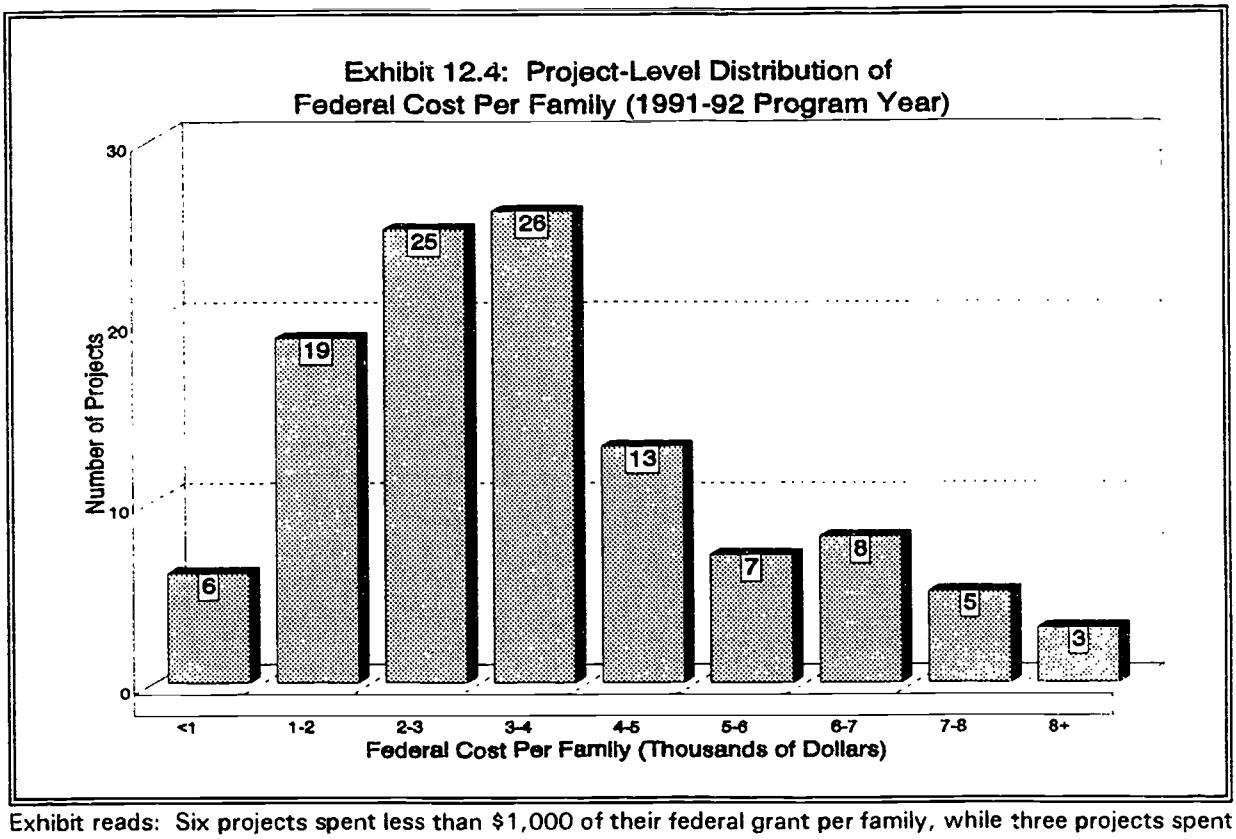


Exhibit reads: Six projects spent less than $1,000 of their federal grant per family, while three projects spent over $8,000 per family.

would be expected, projects that provided their own services expended more of their federal dollars on each family than projects that delegated responsibility for providing services to a cooperating agency. Eight projects retained primary responsibility for providing adult education and early childhood education. These projects spent a relatively large amount ($5,775) of their federal grant on each family because they paid for the direct provision of services. Eighty-three projects shared responsibility for providing core services with cooperating agencies. On average, these projects spent $3,579 of their federal dollars on each family. Finally, eight projects delegated primary responsibility for providing adult education and early childhood education to cooperating agencies. These projects spent an average of $1,878 of their federal dollars on each family.

A second variable that relates to the amount of a project's federal grant spent on each family is the number of families served by the project. As would be expected, projects that served large numbers of families spent fewer federal dollars per family, while projects that served smaller numbers of families spent more federal dollars per family.

In 1991-92, there were 18 projects that served fewer than 30 families. On average, they spent $6,312 per family. The 66 projects that served between 30 and 99 families spent $3,742 per family. And finally, the 28 largest projects, which served 100 or more families, did so at a federal cost of $1,659 per family.

Exhibit 12.5

Federal Cost Per Family by Project Size and Locus of Responsibility for Core Services (1991-92 Program Year)

Project Characteristic	Number of projects	Average Grant Per Participating Family
Locus of primary responsibility for adult education and early childhood education services		
Even Start	8	$5,775
Both	83	$3,579
Cooperating agency	8	$1,878
Number of participating families		
Less than 30 families	18	$6,312
30-99 families	66	$3,742
100 or more families	28	$1,659

Exhibit reads: Projects responsible for directly providing core services had higher costs than projects which relied on cooperating agencies. Small projects had higher costs than large projects.

Note: Only projects reporting at least ten participating families were included in the analysis.

Chapter Thirteen

Summary and Conclusions

Highlights

Authorized by Congress in 1988, the Even Start Family Literacy Program is designed to improve the educational opportunities of the nation's children and adults by providing three core services to participating families: early childhood education, adult education, and parenting education. Federal Even Start funds are used for coordinating existing services as well as for the direct provision of services which are not locally available.

Implementation of Even Start

- During its first four years Even Start provided for the implementation of several hundred projects which delivered family literacy services to more than 20,000 families at a Federal cost of about $2,500 per family per year. [see Chapter 4, p.41 and Chapter 12, p.231-236]

- Even Start served its intended population. Of all Even Start adults served, 79 percent did not complete high school, and 66 percent of Even Start families had total annual income under $10,000. The average adult entered Even Start with the literacy skills of a high school student, while the average three- or four-year-old child who entered Even Start scored at the 9th percentile on a nationally-normed vocabulary test. [see Chapter 4, p.39-70]

- The average Even Start family participated in the program for seven months and received an average of 13.5 hours of adult education, 6.5 hours of parenting education, and 2 hours of early childhood education each month. [see Chapter 6, p.137-145]

- Virtually all Even Start projects offered the three required core instructional services of adult education, parenting education, and early childhood education. They also offered some instructional services in a home-based setting, some services to parents and children together, and appropriate support services to enable families to participate fully in Even Start's core services. [see Chapter 5, p.72-81]

Effect of Even Start on Program Participation

- Adults and children in Even Start families participated much more frequently in educational services than they would have had they not been in the program: 91 percent of Even Start families participated in adult education vs. an estimated 30-40 percent without the program, 95 percent participated in parenting education vs. an estimated 8 percent without Even Start, and 98 percent participated in early childhood education vs. an estimated 60 percent in the absence of Even Start. [see Chapter 6, p.127-131]

Effect of Even Start on Parents

- Even Start helped many adults attain a GED. Across all 120 projects in the evaluation, 8 percent of adults who entered Even Start without a GED or diploma achieved one. In a randomized experimental study of a subset of 5 Even Start projects, significantly more adults in Even Start than in the control group attained a GED (22 percent vs. 6 percent). [see Chapter 9, p.192-198]

- Adults who participated in Even Start achieved significant positive gains (about 4-5 points, or 1/3 of a standard deviation) on the CASAS reading survey (a measure of adult functional literacy in reading), gains which are comparable or greater in size than those observed in other studies of adult education programs. However, families in a control group achieved similar gains. [see Chapter 9, p.183-192]

- Even Start did not produce any measurable effects on parenting skills as assessed by self-report measures of the home learning environment, parenting activities, parental expectations, sense of mastery, and depression; and in-home observations of parents reading to their children. This could be due to a weakness in our ability to measure these areas, to generally positive parent responses and high self-ratings at pretest, or to a lack of program effectiveness. [see Chapter 10, p.202-218]

- Even Start did not produce any measurable effect on family resources, income, or employment. It is unlikely that effects in these areas would be evident in the relatively short time period covered by this study. [see Chapter 11, p.219-230]

Effect of Even Start on Children

- Even Start children made learning gains, both in terms of school readiness skills and on a vocabulary test.

- By participating in Even Start, children learned school readiness skills such as colors, shapes, and sizes (as measured by the PreSchool Inventory) significantly faster than would be expected on the basis of normal development. Further, after one year of participation, Even Start children had significantly higher scores on the PSI than children in the control group. However, control group children caught up once they entered preschool or kindergarten. [see Chapter 8, p.157-165]

- When they entered the program Even Start children scored quite low, at the 9th percentile nationally, on the Peabody Picture Vocabulary Test (a test of receptive language). During their participation in Even Start, children gained a significant amount on the PPVT (so that they scored at the 19th percentile nationally). However, children in a control group gained a similar amount. [see Chapter 8, p.165-173]

Relationship Between Amount of Service and Outcomes

- A high level of exposure to program services is important. Adults and children with high levels of participation in Even Start's core services gained significantly more on tests than adults and children with low levels of participation. [see Chapter 8, p.180-181 and Chapter 9, p.189-192]

- The extent to which parents took part in parenting education is significantly related to gains in children's vocabulary (as measured by the PPVT), over and above gains in vocabulary that result from children participating in early childhood programs. Families that participated in a relatively low-intensity or moderate-intensity program had children who scored at the 17th to 19th percentile, while families that participated in a relatively high-intensity program had children who scored at the 26th percentile [see Chapter 8, p. 175-180].

To sum up, Even Start has had some positive short-term effects on children and adults, although those effects vary greatly across projects. In fact, there is great project-to-project variation in all facets of Even Start--program planning and implementation, characteristics of families served, participation, and outcomes. Even Start's services did result in gains for children and their parents, but on average, the gains are not greater than those that similarly motivated families would obtain for themselves using locally available services. In order for Even Start to have a larger effect, it must provide services more intensively.

Even Start families that were intensively engaged in core services did better than families with lower levels of participation. Further, there are indications that providing parenting education to parents has positive effects on their childrens' vocabularies. This type of

parent-to-child effect is encouraging in that it is exactly what Even Start hopes to produce. While other early childhood programs have demonstrated positive short-term effects on children, and some adult education programs have demonstrated positive effects on adults, Even Start is one of the few programs that has focused on parent literacy, parenting skills, and child development all at the same time.

In the long run, it is hoped that Even Start's effects on children will be enhanced because of the positive changes made in their parents. Follow-up studies of Even Start participants could be conducted to determine whether this long-term portion of Even Start's theory holds--that positive effects on parents will lead to long-term positive effects for children's cognitive development, social-emotional development, and behaviors.

The remainder of this executive summary expands upon these highlights. A full evaluation report is available from the U.S. Department of Education, Planning and Evaluation Service, or from Abt Associates Inc. of Cambridge, Massachusetts.

Characteristics of Even Start Participants

Based on data reported for the 1989-90 through the 1992-93 program years, Even Start projects are serving the intended population. All participating Even Start households had at least one child between birth and age seven, 79 percent of the adults who participated in Even Start core services did not complete high school, and 66 percent of Even Start families had total annual income (earned income plus public assistance) under $10,000. The Even Start population can be further described as follows:

- 50 percent of Even Start families describe themselves as couples with children, 37 percent are single parent households, and 13 percent have extended families or other living arrangements.
- 46 percent of Even Start families report job wages as their primary source of financial support, while 49 percent report that government assistance is their primary source of support.
- Most adults in Even Start are ages 22-29 (46 percent) or 30-39 (31 percent).
- 40 percent of Even Start adults are white, 26 percent are African American, 22 percent are Hispanic, 4 percent are Native American, and 8 percent are Asian or Pacific Islander.
- English is the primary language for 66 percent of Even Start adults; Spanish is the primary language for 26 percent.
- Seven percent of the children served by Even Start were identified as having a disability.

- The average age of Even Start children dropped from 4.3 years in 1989-90 to 3.7 years in 1992-93, reflecting a federal emphasis on serving younger children.

- Even Start children scored low, at the 9th percentile nationally, on a vocabulary test given when they entered the program.

- Even Start adults attained high school level scores on a functional literacy reading test given when they entered the program.

LEP Adults. Even Start adults with limited English proficiency (LEP) can be characterized as follows: 86 percent were educated outside of the United States, 60 percent did not reach the ninth grade, 78 percent were not employed at the time they joined Even Start, 83 percent had an annual income of less than $15,000, and 18 percent were single parents.

Adults Who Enter with a Diploma or GED. Twenty-one percent of the adults who participated in Even Start entered already having attained a high school diploma or a GED. While this is less than the 33 percent of adults that enter regular adult education programs with a diploma, questions have been raised about the fairness of serving these potentially less-needy adults in Even Start. Data show that adults who enter Even Start with a diploma or GED have characteristics that still suggest the need for Even Start services: 40 percent were single parents, 67 percent were not employed, 78 percent had annual income under $15,000, and 54 percent relied on government assistance for their primary source of income. In addition, the average CASAS reading score for these adults is 233, quite close to the average of 230 for adults who reached grades 9-12 prior to joining Even Start. This shows that, in spite of their credentials, adults who entered the program with a GED or diploma are not functioning at a higher level than their less-credentialed counterparts.

Implementation of Even Start Projects

Virtually all Even Start projects offer the three required core instructional services of adult education, parenting education, and early childhood education. They also offer some instructional services in a home-based setting, some services to parents and children together, and appropriate support services to enable families to participate fully in Even Start's core services.

Early Childhood Education. Children in Even Start projects were provided a range of early childhood education services:

- 67 percent of the projects enrolled some of their children in Head Start, 50 percent enrolled some of their children in a Chapter 1 pre-K program, and 87 percent provided some other preschool option.

- For children old enough to enter the public schools, most Even Start projects participated in joint planning activities with the public schools. Hence, 78 percent of the projects included kindergarten as an Even Start service, and 70 percent provided early childhood education services to children under age eight who were in primary grades, again through joint planning with the public schools.

Adult Education. Almost all (93 percent) of the projects reported that they provided services to prepare adults to attain a GED certificate, 85 percent provided services in adult education, 81 percent provided services in adult secondary education, and 61 percent provided instruction in English as a second language (ESL).

Parenting Education. Even Start projects provided a wide range of services to help parents understand and enrich their child's development. For example, projects helped families make use of services provided by other social service agencies, discussed parents' role in the education of their children, oriented parents and children to school routines, taught parents about child development, trained parents in child behavior management, worked to build parents' self-esteem, and instructed parents in life skills and in principles of health and nutrition. Each of these different types of parenting education was provided by 90 percent or more of the Even Start projects.

Adult/Child Services Delivered Through Even Start. More than 90 percent of the Even Start projects reported that they delivered core services to parents and children together. This is an important part of the Even Start model in that it impresses on parents that they are key to their child's education. Examples of services delivered to adults and children together include reading and story telling, developing readiness skills, social development and play, development of gross motor skills, working with numbers, arts/crafts, and health/nutrition.

Support Services. Support services remove barriers that could restrict a family's ability to participate in Even Start core educational services. Several types of support services were provided by 80 percent or more of the projects including transportation, family advocacy assistance, nutrition services, counseling services, and child care.

Cooperative Arrangements. Even Start projects are required to establish cooperative arrangements with other agencies to avoid duplicating services. This strategy allows optimal use of limited resources so that projects can concentrate on filling service gaps. Collaboration and cooperative arrangements were, indeed, a key focus of Even Start projects. During the 1992-93 program year, Even Start projects were involved in more than 6,000 cooperative arrangements to provide core services, an average of 20 cooperative arrangements per project. Forty-two percent of the arrangements were for parenting education, 27 percent were for adult basic education, and 31 percent were for early childhood education. The most common cooperators were "other departments and programs within the public schools," "local, county, state or tribal agencies," and "postsecondary institutions."

Implementation Problems. Even Start projects reported several barriers to implementation. The most common barriers were difficulties in the recruitment, retention, attendance, and

motivation of families, problems of communication and coordination with cooperating agencies, lack of transportation for families, the unexpectedly severe social service needs of the families and community, lack of quality child care, financial problems, staffing problems, and problems with facilities and space.

Staffing Even Start Projects. Most Even Start projects have a project administrator and three to five staff who provide instruction in early childhood education and adult education. About half of the project administrators have multiple job responsibilities, including coordination or supervision in each of the three core services, recruiting families, and project evaluation.

- Approximately 54 percent of the staff providing services to Even Start families are paid by collaborating agencies, 32 percent are paid through the federal grant, and 13 percent are paid with local matching funds. Staff from collaborating agencies are most likely to provide direct instruction in early childhood education and adult education, although their classrooms may have a small number of Even Start participants.

- Even Start project administrators have an average of nine years of work experience in early childhood education programs, four years in adult education programs, and six years with parenting education.

- Early childhood education teachers have an average of eight years of work experience in that field, while adult education teachers have an average of five years of work experience in adult education programs.

One-third of Even Start staff have a college degree, 20 percent more have a master's degree, and an additional 9 percent have a doctorate. Those with a master's degree or beyond tend to be project directors, coordinators, or staff involved in the evaluation. More adult education teachers (36 percent) have a master's or doctorate than early childhood teachers (20 percent) or parenting education teachers (28 percent). Nearly one-quarter of early childhood or parenting education teachers do not have a college degree compared to only 9 percent of adult education teachers.

Even Start staff reported receiving an average of 40 hours of inservice training per year. Sessions most frequently focus on curriculum and instruction in the core service areas. Staff attended state, regional, and national conferences on family literacy, early childhood education, adult education, vocational education, and bilingual education.

Participation in Even Start

The great majority of Even Start families participate in early childhood education, parenting education, and adult education services. The proportion of families participating

in all three core services is much higher in mature projects than in projects in their first or second year of operation.

Number of Participating Families. The number of families participating in Even Start has increased over time. This is due both to the addition of new projects and to improved efficiency among existing projects. During the 1989-90 school year, when Even Start began, 76 projects served about 2,500 families. By the 1992-93 school year, the program had grown to 340 projects which served about 20,000 families.

Length of Participation. Although Even Start projects generally are funded for four years, relatively few families take part for that amount of time. Of the families that began Even Start in 1989-90, 53 percent participated only in that first year, 24 percent participated in both the first and second program years, 13 percent participated in the first three program years, and 10 percent participated in all four years.

Reasons for Leaving. There are many reasons that families end their participation in Even Start; some are indicators of program success, while others signal problem areas. Seventy percent of the families that left the program indicated a reason for doing so. Based on families that reported a reason for leaving, completion of the planned educational program or meeting personal objectives was listed by 24 percent of families that exited Even Start. Moving out of Even Start's catchment area was listed for 24 percent of families that exited. Thirteen percent of the families left because of a general lack of interest in the program and a subsequent refusal to participate. Another 12 percent reported that a family crisis prevented them from participating. Ten percent left because they became ineligible due to a change in the family situation, i.e., there was no longer an eligible child or adult in the family. Five percent gave a variety of reasons including medical problems, work conflicts, pregnancy, scheduling conflicts, child care problems, and a lack of transportation.

Participation in Core Services. The Department of Education requires that all Even Start families participate in the three core service areas during their time in the program.

- Almost all families had a child that participated in early childhood education during each year of the study: 90 percent in 1989-90, 97 percent in 1990-91, and 98 percent in 1991-92 and 1992-93.

- Participation rates for parenting education were a little lower: 88 percent in 1989-90, 94 percent in 1990-91, 93 percent in 1991-92, and 95 percent in 1992-93.

- At the beginning of Even Start, participation rates were low for adult education; 54 percent in 1989-90. This was due, in part, to misunderstandings about the definition of legitimate adult education services as well as problems convincing adults to participate on a regular basis. The Department of Education and local projects worked hard to increase these rates to 80 percent in 1990-91, 90 percent in 1991-92, and 91 percent in 1992-93.

- The percentage of families participating in all three core services increased steadily over the four years of the study, from 46 percent to 75 percent to 84 percent to 86 percent.

Amount of Core Services Received. The typical Even Start family received core services in seven different months during their period of enrollment in Even Start.

- The total amount of service received by the average family is 107 hours for adult education (median of 41 hours), 58 hours for parenting education (median of 29 hours), and 232 hours for early childhood education (median of 102 hours). There is great variation in these numbers across projects.

- On a monthly basis, the average Even Start family received 13.5 hours of adult education (median of 9 hours), 6.5 hours of parenting education (median of 4 hours), and 26 hours of early childhood education (median of 14 hours).

There is a clear relationship between amount of early childhood education and age of child. The average Even Start child less than one year of age received 15.5 hours per month. One-year-olds received 14.3 hours per month, two-year-olds received 20.0 hours per month, three-year-olds received 29.2 hours per month, and four-year-olds received 35.5 hours per month (this is about 25 percent less than the average amount of early childhood education received by Head Start children).

Relationship Between Home-Based Services, Retention, and Amount of Service. There is a strong positive relationship between the amount of home-based service provided by a project and retention/participation in Even Start. Program retention, defined as the percentage of families participating in Even Start for six or more months, increases from about 40 percent in projects that provided no home-based services, to about 70 percent in projects that provided two-thirds or more of their services in the home. At the same time that retention is improved, hours of service are decreased in projects that emphasize home-based instruction. That is, the average hours of instruction per month received by participating families decreased as the amount of home-based instruction increased. It is easy to have high amounts of instruction in a center-based early childhood program where children participate as a group, while a home-based program which includes one-on-one instruction rarely will be able to provide more than one or two hours per week.

Effects of Even Start on Services Received

Our ability to attribute any observed changes in adults or children to Even Start as opposed to other factors is dependent on the extent to which Even Start has been able to increase families' participation in the three core service areas over what it would have been in the absence of Even Start. Data from this study show that Even Start has substantially increased participation rates in the three core service areas.

- We estimate that without Even Start, 30 to 40 percent of the Even Start population would take part in adult education. This is substantially less than the 91 percent participation rate achieved for Even Start families during the 1992-93 program year.

- For parenting education, participation increases from 8 percent without Even Start to 95 percent for families in Even Start.

- For early childhood education, participation rates are estimated to be about 60 percent in the absence of Even Start and 98 percent for families in Even Start.

These increases in service levels indicate that Even Start projects achieved the important step of ensuring that program services actually were received by participating families.

Effects of Even Start on Children

Children in Even Start acquired school readiness skills earlier than their counterparts in a control group. Further, children of adults with high amounts of exposure to parenting education classes gained more on a vocabulary test than children of adults with less exposure to parenting education.

School Readiness. The PreSchool Inventory (PSI) measures school readiness skills (e.g., shapes, colors, sizes) and we expect children's scores on the PSI to improve with age, simply as a function of maturation. Based on data collected through the NEIS (and from many other studies that have used the PSI), we know that children's PSI scores increase by about .40 items per month due to normal maturation.

- By participating in Even Start, children's PSI scores increased at more than double the expected rate, by .91 items per month.

- Data from the In-Depth Study show that Even Start children gained more than control group children during their early participation in the program.

- However, follow-up measurements show that after 18 months control group children caught up with their Even Start counterparts, both because control group children enrolled in preschool or kindergarten, and because some Even Start children no longer participated in an Even Start early childhood program.

- Data from the NEIS show a positive relationship between amount of participation in early childhood education and gains on the PSI.

When they were three or four years of age, Even Start children were more likely than control group children to participate in early childhood education programs. Because of

this, they showed an accelerated rate of learning on the PSI, suggesting that they learned basic concepts and precursors of kindergarten skills at an earlier age than they would have in the absence of the program. However, as control group children reached four and five years of age they, too, enrolled in preschool or reached public school age. At that point, they learned many of the same skills that Even Start children had learned at a younger age. What is not known is the long-term effect of the early boost in learning that was experienced by Even Start children. It is possible that since Even Start children learned readiness skills prior to entering the public schools, they may have progressed to other skills during kindergarten.

Receptive Vocabulary. The Peabody Picture Vocabulary Test (PPVT) measures hearing (receptive) vocabulary. Unlike the PSI, the PPVT has national norms. When given the PPVT as a pretest, Even Start children averaged 80 standard score points. This corresponds to the 9th percentile nationally and highlights the low verbal skills of children at entry to Even Start.

When compared with national norms, data from the NEIS indicate that Even Start children gained more than would be expected without the program; when posttested, they scored at the 19th percentile nationally. However, the In-Depth Study shows that Even Start children gained no more than their control group counterparts. As was the case for the PSI, data from the NEIS demonstrate a positive relationship between amount of early childhood education service and gains on the PPVT.

Emergent Literacy Skills. The Children's Emergent Literacy Test (CELT) was developed by Abt Associates for this evaluation because no existing measure of children's emergent literacy skills was ideally suited to the Even Start evaluation. The CELT includes items assessing orientation and directionality of text, recognition or letters and punctuation, and the purposes of reading. It was administered only in the In-Depth Study, and while Even Start children gained a significant amount, there was no program impact because control group children also gained on this measure.

Correlates of Child Effects. Greater exposure to early childhood education is associated with greater gains for children on the PSI and PPVT. Just as important, and more relevant to the special focus of Even Start, there is a statistically significant positive relationship between the amount of time that parents spend in parenting education and their childrens' PPVT scores. In particular, PPVT scores are expected to increase by 1.1 points for each 100 hours that a child participates in early childhood education and by an additional 1.4 points for each 100 hours that a parent participates in parenting education. Although this finding is derived from a correlational (rather than experimental) analysis, it suggests that the Even Start model has added benefits for children beyond the expected benefits that are generally derived from a traditional early childhood education program.

Effects of Even Start on Parent Literacy

Even Start helped many adults acquire a GED. While adults who participate in Even Start achieved positive gains in functional literacy in reading, adults in a control group also achieved some gains.

GED Attainment. Many Even Start projects promote attainment of a high school diploma or a high school equivalency diploma such as the GED certificate, as do most adult education programs. The rationale for this goal is based upon a belief that a diploma or GED increases an adult's chances to find employment, provides opportunities for higher wages, and improves the quality of life through enhanced self-esteem. However, GED attainment is not an immediate or appropriate goal for all participants, nor is it emphasized by all projects.

Even Start has a strong, positive effect on GED attainment. Data from both the In-Depth Study and the NEIS lead to the same conclusion: Even Start has led to a substantial increase in the percentage of adults attaining a GED.

- Across all Even Start projects, 8.3 percent of all adults who entered Even Start without a GED or diploma achieved one while participating in adult education services.

- Data from the In-Depth Study show that 22.4 percent of Even Start adults attained a GED compared to 5.7 percent of adults in control group families.

Functional Literacy in Reading. Even Start projects may have been effective in improving the functional literacy of participating adults but the results from this evaluation are not conclusive.

- Data from the NEIS show that adults who participate in Even Start achieve positive gains on the CASAS reading survey, gains which are comparable or greater in size than those observed in other studies of adult education programs.

- However, data from the In-Depth Study show that the gains of Even Start adults are not significantly greater than the gains achieved by a randomly assigned control group, so we cannot conclude that Even Start has had a positive impact in this area.

- Even Start adults who spent large amounts of time in adult education had greater CASAS gains than adults who spent small amounts of time in adult education. This is the same relationship that was seen between participation in early childhood education and child-level gains on the PSI and PPVT.

Reading/Writing in the Home. No measurable effects were detected over an 18-month period on the extent to which parents read and write as part of their daily lives at home.

Effects of Even Start on Parenting Skills

Even Start did not measurably improve parenting skills in areas such as self-esteem, depression, or positive parent/child interactions. This could be due to a weakness in our ability to measure these areas, to generally positive parent responses and high self-ratings at pretest, or to a lack of program effectiveness.

Parents' Personal Skills. Parents' personal sense of well-being, as measured by a sense of mastery over their lives and a lack of depression, has been cited in the research literature as being related to the nature and quality of parent-child and family relationships. Data from the In-Depth Study did not reveal any effect of Even Start on these variables. The prevalence of mothers with depressive symptoms as measured by the CES-D scale was high among this group of families (46 percent of Even Start mothers were classified as having high levels of depressive symptoms at the time of the pretest), although this is no higher than what has been reported in other studies of low-income women with small children.

Home Learning Environment. Several scales describing different aspects of the home learning environment were included both in the In-Depth Study and in the NEIS (e.g., measures of learning activities in the home, teaching child at home, talking with child at home, family rules, activities outside home, and the Parent As A Teacher scale). While all variables showed small but significant positive changes on the NEIS, the In-Depth Study found a positive program effect only on one scale: the number of reading materials in the home. This scale measures the number of different types of reading materials found in the home, e.g., books, magazines, newspapers. This finding is consistent with the observation that many Even Start projects make a concerted effort to increase the number of reading materials in participants' homes, either through loans or donations.

Parent-Child Reading Task. The In-Depth Study included a newly-developed measure of parent-child reading interactions. The parent was asked to read a simple book to her child while a trained observer used a pre-coded rating form to record five major aspects of parent-child interactions: parent describes book to child, parent questions or responds to child, child responds, parent's general affect, and child's general affect. There was no effect of Even Start on any of the five areas of observation.

Parental Expectations. In both the In-Depth Study and the NEIS, parents were asked questions about how well they expected their child to do in high school and the likelihood that their child will graduate from high school. As is the case for such questions in most studies, parents generally had high expectations for their children at the pretest. Even Start significantly increased parental expectations as assessed by the NEIS but not the In-Depth Study.

Effects of Even Start on Families

The In-Depth Study included several measures of the effects of Even Start on participating families including their perceived social support, adequacy of financial resources, income level and sources, and employment status. The NEIS instruments had questions about income and employment. There were no significant program effects on any of these measures. This is not surprising -- these areas are very difficult to change because they are affected by circumstances beyond the control of the program, such as the local economy and the availability of jobs. It is likely that longer interventions and other positive short-term impacts will be required in order to achieve significant gains on these measures.

While there are no effects for families on these quantifiable variables, Even Start participants described a number of qualitative changes in their lives and the lives of their children. Listening to the personal stories of program participants during focus groups conducted in ten projects, it became apparent that parents saw positive changes in their attitudes and skills. Parents described themselves as moving toward their goals of an educational certificate, getting a job and being a better parent. Given the entry status of Even Start parents, it is reasonable that we do not see short-term changes in the distal outcomes of increased employment and income.

Cost of Even Start

The federal cost per Even Start family declined over the life of the program, from $5,894 in 1989-90 to $3,669 in 1990-91, and again to $2,503 in 1991-92. This is due to increases in the number of families served each year, indicating that over time, projects have matured and become more efficient. Even Start projects also obtain substantial resources (e.g., matching funds, in-kind contributions, and the value of referred services), in addition to their federal Even Start funds, in order to deliver appropriate services to participating families.

- In 1991-92, the average of $2,503 in federal funding per family was augmented by an average of $1,352 in other resources to arrive at total resources of $3,855 per Even Start family. Thus, federal Even Start funds comprise 65 percent of the total resources used per family and other funds comprise 35 percent.

- Almost two-thirds (64 percent) of all resources were spent on the direct provision of services: 31 percent for early childhood education, 15 percent for adult education, 9 percent for parenting education, and 9 percent for support services.

- Funds also were spent for program administration and coordination (14 percent), evaluation (10 percent), case management and recruiting (4 percent), and for other functions (8 percent).

Even Start costs vary tremendously across projects. As might be expected, projects that serve large numbers of families do so at a lower cost per family. In particular, projects that serve 100 or more families do so at a federal cost of $1,659 per family, while projects that serve 30 or fewer families spend an average of $6,312 in federal Even Start funds per family. Also, projects that delegate responsibility for providing core services to cooperating agencies have a lower cost ($1,878 per family) than projects that retain primary responsibility for providing core services (cost of $5,775 per family).

Implementation and Use of the Evaluation

Implementation of the Evaluation. The national Even Start evaluation was implemented as a collaborative effort between staff at the U.S. Department of Education, the staff of the evaluation contractors, and the staff of each Even Start project. It was hoped that a greater than usual level of involvement by Even Start grantees would benefit the evaluation through an increased investment and level of understanding on the part of program implementers, and through a better appreciation of programmatic issues and problems on the part of evaluation staff.

Responsibilities for the national evaluation were divided such that oversight came from the Department of Education; design, analysis, reporting, and technical assistance as well as data collection for the In-Depth Study were provided by the evaluation contractors; and input to the design and analysis, interpretation of findings, and primary responsibility for data collection for the NEIS were provided by local Even Start projects. To enable projects to undertake their evaluation responsibilities, they were given additional grant funds which were used to hire a local evaluator who helped interact with the national evaluation, assisted with data collection, and sometimes designed and conducted their own local evaluation activities to supplement the national evaluation.

Staff from each Even Start project were involved in an early design meeting where feedback was obtained on drafts of the data collection forms, and where a working group of Even Start project directors and local evaluators was established. Subsequent drafts of data collection forms were shared first with the working group, and then with all project directors and local evaluators. Training sessions in administering the data collection instruments were held for all Even Start projects; additional feedback on forms and on data collection problems was provided through formal meetings, mailings, and telephone-based technical assistance.

This approach was seen as experimental, and at the start of the evaluation it was unclear whether local project staff would be willing and able to undertake a high-quality data collection effort. After four years of experience, it is possible to draw the following conclusions about the implementation of the evaluation.

- Many Even Start projects were comfortable with their role as data collectors and were able to turn in high-quality data according to the time schedule set forth for the evaluation. Others needed substantial assistance in complying with the requirements of the

evaluation, and several projects were not able to provide data according to the hoped-for timetable.

- Most Even Start projects availed themselves of the evaluation technical assistance provided by the evaluation contractor, and would have preferred more.

- Data collection was done by local staff with a wide range of backgrounds. In some cases, local evaluators did the data collection. In others, project staff (e.g., case managers, early childhood teachers) conducted the data collection.

- The arrangement to have data collected by local project staff has the drawbacks of potential bias, lack of attention to important details (e.g., matching family identification numbers over time), and work-load conflicts between evaluation and programmatic activities. The training and technical assistance provided by the national contractor worked to ameliorate these problems. On balance, we believe that the reliability of the data collection conducted under this model is somewhat lower than what would be attained by trained researchers, but that the response rates obtained by local staff are probably higher than the response rates that would be obtained by outside staff.

- There was great variability in the interest and ability of Even Start grantees to collect data using a microcomputer-based system. This system worked well for grantees with access to up-to-date equipment and staff who understood the basics of computer systems. Other grantees struggled and were frustrated with this approach, leading to delays in the submission of data. Still others were not able to use a computer-based system, and submitted data on paper forms.

Use of the Evaluation. The evaluation was an integral part of Even Start's development. The Department of Education's requirement to collect a standard set of data on the characteristics of program participants, the operations of each project, and the effects of Even Start led to implementation of an information system that ensured that grantees had common definitions for key programmatic activities. For example, critical definitions such as "Who counts as a program participant?" and "What counts as a core service?" were clarified by the need to provide data for the evaluation.

Descriptive data from the evaluation identified achievements and confirmed that Even Start projects served the intended population and that projects were successful in establishing cooperative relationships with local organizations.

Data from the first year of the evaluation plus ongoing monitoring conducted by the Department of Education discovered a need to revise the program's eligibility requirements so that a family was not terminated from participation when a parent acquired a CED or

a child reached age eight. The legislation was changed so that a family may participate in Even Start until all family members become ineligible.

Additionally, the evaluation discovered that a significant number of Even Start projects had difficulty persuading adults to participate fully in adult education programs. This led the Department of Education to issue non-regulatory guidance as well as provide technical assistance in implementing adult education services for the range of skill levels among Even Start families. Participation rates in the adult education component of Even Start did rise over time, likely as a result of the Department's efforts and increased maturity on the part of projects.

Finally, data from the NEIS were used by individual local projects in preparing local evaluations, and proved to be instrumental in helping some projects gain approval by the Department of Education's Program Effectiveness Panel.

Conclusions

We conclude this report by returning to a subset of the research questions that guided the evaluation and briefly summarizing the answers to each question.

What are Even Start's "best practices"? What types of projects or program elements work best under what conditions?

While evaluating "best practices" directly was beyond the scope of this project, some relevant conclusions can be drawn:

- Program retention is increased in projects that provide home-based services.
- More time spent receiving services is associated with greater gains on literacy tests for adults and children.

Providing home-based services is a good way to increase retention. There is a strong, positive relationship between the amount of home-based services and the length of program participation. In all three core services, the proportion of families who stay in the program more than six months goes up from 40 percent in projects with minimal home-based services to 70 percent in projects where a majority of services are provided in the home.

A greater amount of exposure to Even Start's core services (i.e. larger amounts of time spent receiving core services) appears to have a positive impact on literacy outcomes for children and adults. In other words, more time spent in early childhood education is associated with greater school readiness and vocabulary gains for children, and more time spent in adult education is associated with greater functional literacy gains for adults. The findings about home-based services and amount of service exposure work against each other, since it is difficult to deliver large amounts of instructional service in a home-based setting.

Evaluating "best practices" directly was beyond the scope of this evaluation. Anecdotal reports from the In-Depth Study site visits identified many innovative instructional strategies that were used with parents and children which could benefit from additional research. Examples include:

- Using computers in adult education classrooms to write newsletters sharing personal experiences and program activities and to institute a pen pal program with other Even Start projects.
- Incorporating newspapers into parenting and adult education classes through daily discussions of current events, distribution of free Spanish-language papers, and written homework about newspaper articles.
- Integrating adult and early child education by having parents write stories for their children and make books to read at home.
- Enhancing early childhood classrooms with signs and symbols to foster emergent literacy skills.
- Hiring social workers to provide parenting education and staff training.
- Using a team approach to staffing to facilitate integration of adult and child curricula and instruction in the classroom and during home visits.

How does the program compare to alternative programs addressing the same problem? Is it more effective? How do the costs compare?

This question was not addressed in the current evaluation. However, how Even Start compares to alternative programs in cost and effectiveness is a question that has been asked by researchers and policymakers over the course of the evaluation, and merits further study.

What is the program's impact on its target population and service delivery structure?

Even Start is not large enough to make an impact on its entire target population. However, it has had a broad impact on individual families and many local service communities.

Some limited, anecdotal information about Even Start's impact on the local service delivery structure was collected as part of the In-Depth Study. In that component of the evaluation, project directors described how some school districts had incorporated aspects of Even Start, such as home visits or parent involvement, into the district's philosophy

and approach. In order to gather more systematic data about community impacts, a separate study focusing on that topic would be necessary.

Even Start is too small a program to make a major impact on its entire target population. In spite of this caveat it is important to take note of several areas which indicate that Even Start has had a broad impact. First, Even Start funding has grown substantially each year since 1989. In a time of fiscal austerity, this is a clear and visible signal that Even Start proponents have been able to make a convincing case for the benefits of their program. Second, Even Start projects now exist in every state in the nation -- a further indication of Even Start's widespread support. Third, anecdotal evidence shows that local Even Start projects have generated a wealth of valuable and practical ideas about implementing family literacy programs -- ideas which have helped other program developers.

How well does the basic Even Start model work?

Even Start has been well-implemented over a period of years, leading to short-term improvements in the lives of many adults and their children. Based on the findings from this evaluation, we can draw several conclusions about the viability of the basic Even Start model:

- The model takes multiple years to fully implement. While implementation is not easy, almost all projects are able to offer all three core services and multiple support services, to offer some home-based services, and some services to parents and children together, and to make appropriate collaborative arrangements with local service providers.

- As they matured in their third and fourth years, Even Start projects were able to use the same amount of resources to recruit and serve about twice as many families as they served in their first year.

- The total amount (i.e., number of hours of participation) of core instructional services received by participating families is important. A larger amount of participation in core services is associated with larger test gains for adults and children.

- Participation in adult education services led many Even Start adults to attain a GED certificate.

- Participation in early childhood education led Even Start children to attain school readiness skills sooner than they otherwise would have.

- Greater parents' participation in parenting education is related to increases in their children's vocabularies.

- Even Start did not produce any measurable effects on parenting skills, family resources, income, or employment.

- Program retention is increased in projects that provide larger amounts of home-based services.

The current evaluation has identified areas where Even Start has had short-term effects on children and parents. However, in order to evaluate long-term effects on program participants, a longitudinal study is required. For example, the long-term effect of Even Start on children's school behaviors and cognitive performance is a critical element in assessing Even Start's impact. To investigate this, a study is needed that follows Even Start children into the public schools and collects information from teachers, parents, and students.

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INDEX

Adult basic skills 2, 12, 13, 22
Adult education . 1-3, 5, 8, 12, 19-24, 26, 27, 29, 30, 32, 34, 39, 49, 53, 66, 72, 75-77, 83, 87-89, 92, 93, 100, 102, 103, 105-112, 114, 116, 117, 120, 122, 127, 129-131, 134, 138, 141, 142, 145, 146, 148, 150, 175, 176, 179, 181, 183, 185, 187-189, 191, 192, 195, 196, 201, 202, 209, 219, 223, 225, 228, 233-236
Adult/child 76, 146
Adults and Children Together 71, 76, 145, 146
Age 2, 5, 8, 18, 20, 21, 30, 45, 50, 56, 63, 69, 75, 96, 124, 130, 142, 154, 158, 160, 165, 166-168, 172-174, 196, 209, 227
Amount of participation 134, 138
CASAS 50, 51, 53, 64, 67, 98, 100, 176, 183-185, 188, 189, 191, 195, 196, 201
CCDP 39, 63, 204
CES-D 203, 204
Child's Emergent Literacy Test 156, 157, 174, 176, 181
Collaborative arrangements 85
Cooperating agencies 8, 71, 72, 75, 76, 78, 81, 83, 86, 88, 235, 236
Cooperative Arrangements 71, 81, 83, 85
Cost 10, 16, 76, 231-236
Depression 156, 202, 203, 216
Early childhood education . 1, 2, 8, 9, 11, 19-21, 27-30, 32, 34, 39, 75-77, 83, 100, 102, 103, 106-112, 116, 117, 127, 129-131, 137, 142, 145, 146, 148, 150, 158, 163, 165, 168, 170, 173, 175, 176, 180-182, 209, 231, 233-236
Educational attainment 8, 11, 48, 216
Effects on children 9, 150, 181, 229
Employment . . 8, 9, 36, 39, 56, 78, 104, 153, 156, 184, 192, 216, 219, 223, 225, 227, 230
English as a second language 8, 22, 72, 116, 189
Evaluation 1, 3-5, 9, 12, 13, 15, 17, 49-51, 53, 63, 64, 67, 68, 86, 92, 97, 101-104, 107, 108, 120, 124, 125, 127, 134, 141, 142, 150, 152, 155, 157, 158, 160, 165, 166, 168, 175, 181, 183, 184, 189, 195, 201, 202, 204, 205, 216, 223, 227, 231, 233, 234
Evaluation design 97
Even Start staff . . 10, 20, 21, 30, 32, 72, 75, 76, 87, 101-103, 107, 108, 111, 114, 116, 117, 120, 121, 125, 137, 147, 175, 181, 184
Family resource scale 220, 221
GED 8, 11, 20-22, 49, 50, 66, 67, 69, 72, 96, 110, 120, 124, 127, 130, 136, 141, 153, 156, 167, 172, 183, 184, 187, 188, 192, 193, 195-197, 201, 227-229
Gender 9, 46, 60, 165, 167, 172, 197, 227
Head Start . . 1, 8, 9, 20, 21, 24, 32, 37, 40, 60, 63, 69, 71, 72, 75, 76, 83, 88-90, 97, 130, 142, 145, 157, 161, 231
HOME 205
Home environment 204-206, 208, 209, 217
Home learning environment 156, 202, 204, 206, 209, 216
Home visits 5, 20, 21, 24, 26, 35, 37, 71, 87, 92, 93
Home-based services 8, 124, 145, 147, 180

Household composition 39, 40
Implementation Barriers 87-94
Income 40, 45, 63, 64, 67, 153, 156, 165, 168, 173, 175, 177, 195, 197, 205, 219-222, 230
Infants and toddlers 30, 56
Inventory of Socially Supportive Behaviors 219
Length of participation 12, 125, 134, 155, 173
LEP 39, 64, 69, 145
Limited English proficiency 49, 51, 64
Locus of control 202
Maturation 169, 170
Model . . . 9, 11, 12, 15, 17, 20, 26, 29, 35, 37, 76, 89-93, 97, 99, 121, 150, 154, 174, 177, 179, 189, 209
Outcomes 4, 5, 8, 9, 12, 15, 53, 97, 150, 157, 175, 179-182, 209, 219, 230
Parent as a Teacher 156, 205, 207
Parent education 5, 8, 11, 21, 24, 30, 32, 100, 105, 114, 208
Parent-Child Reading Task 202, 211, 213, 217, 218
Parenting education 2, 24, 27, 34, 39, 72, 75-77, 83, 102, 103, 105-109, 111, 114, 117, 120, 127, 129, 130, 131, 137, 142, 145, 146, 148, 150, 157, 175, 176, 180, 182, 209, 233
Parents' expectations 156, 202, 213, 215, 216
Pearlin Mastery Scale 202, 203
PPVT 63, 165, 166, 168, 169, 171-173, 175, 176, 180, 182, 189
Process outcomes 150
Program Design 5, 86, 97
PSI 157, 158, 160, 161, 163-165, 167-169, 173, 175, 180, 182, 189
Race 9, 39, 46, 60, 154
Reading activities scale 199
Reason for leaving 134, 136
Recruitment 10, 16, 34, 35, 71, 86, 87, 103, 104, 108, 116, 120, 134
Research Questions 5, 9, 12
Retention 9, 12, 32-35, 86, 87, 120, 124, 134, 138, 147, 148
Screening 10, 71, 72, 87, 88, 92, 98, 100, 110, 169
Self-efficacy 202
Self-esteem 8, 34, 72, 192, 202, 229
Service intensity 148, 180
Social support 156, 219, 220, 230
Staff development 5, 77, 116, 117, 120, 121, 123
Staff Education 114
Staff Turnover 104, 123
Staffing 21, 30, 32, 35, 71, 86, 91, 99, 101, 121, 123, 181
Support services . . 8, 36, 39, 71, 77-79, 81, 85, 94, 102, 103, 108, 150, 219, 231, 233
Technical Assistance Needs 86, 101
TVIP 166, 169, 170, 174
Writing activities scale 199